BURNING QUESTIONS: VoIP

- Do I need an $800 IP phone?
- Will SIP ever be ready for the desktop?
- How do I run my business on Skype? **Page 22.**

As the spam changes
Image spam is on the decline, but PDF-based spam is coming on. **Page 16**

NETWORKWORLD

The leader in network knowledge ■ www.networkworld.com July 16, 2007 ■ Volume 24, Number 27

Microsoft talks software services

Company CEO Steve Ballmer lays out the future of Microsoft's software services. **Page 12.**

The 7 Wonders of the Internet

Never mind architecture; check out "The 7 Wonders of the Internet" — a Buzzblog community effort. **Page 20.**

PKI pizazz

Illinois has issued over 107,000 digital certificates on behalf of state agencies, universities and law enforcement. **Page 24.**

Emoticon turning 25

Scott Fahlman is the guy you want to thank :-) or blame :-(**Page 42.**

Dual mode to spur VoIP on WLANs

BY TIM GREENE

Avaya plans to team up today with Nokia to support dual-mode Wi-Fi-cellular phones as the race to link cell phones with corporate VoIP systems heats up.

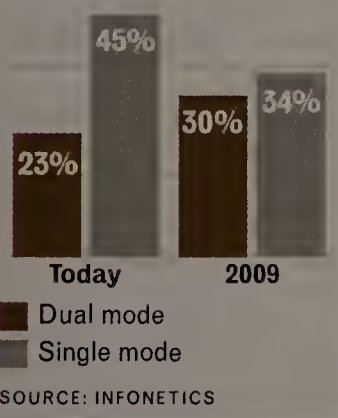
SPECIAL FOCUS

Specifically, the companies are announcing that the combination of Avaya's one-X Mobile Dual Mode Edition software on Nokia Eseries phones and Avaya Communications Manager IP PBXs will let users make and receive corporate phone calls on the mobile devices. The software to upgrade the phones is available.

See Wireless VoIP page 18

Dual-mode rising

How do users access voice services on WLANs?



SOURCE: INFONETICS

CRUNCH TIME FOR EMC

Extreme makeover shifts from acquisition to execution phase. **PAGE 32**

Kenneth Deans, CIO of Bassett Healthcare, is bullish on EMC, but industry watchers say the jury is still out on whether the company can deliver on its grand vision of information management.

EMC is set to refresh its storage system families this week. **Page 10**

ELIZABETH WEINBERG

Sniping intensifies over document formatting

Microsoft, Massachusetts at center of debate

BY JOHN FONTANA

With less than a week remaining to collect comments on a plan to adopt Ecma International's Open XML standard, the commonwealth of Massachusetts is mum on how the issue is faring, but some who disagree with the action already are voicing their opinion publicly.

Andy Updegrove, a lawyer, a board member of the Linux Foundation and a Massachusetts resident, is stirring up controversy with comments he submitted to the Massachusetts Information Technology Department (ITD) that oppose the Open XML initiative.

"Microsoft is hardly to be blamed for lending no support to the success of the Open Document Format (ODF). But neither should it be rewarded for launching a competing, self-serving standard as a next-best defense against erosion of its dominant position," he wrote in comments submitted to the ITD.

See Turbolinux, page 14

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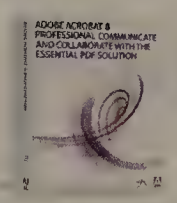

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LETTERS

Clean machine

Thanks for the information on CCleaner (www.nwdocfinder.com/9521). I downloaded it after reading Mark Gibbs' column and ran it on my Windows XP laptop. The free space on my C drive was 8.3GB at the start of the process. After I let CCleaner flush everything, the free space was 16GB!

Jerry Gauthier
Sandwich, Mass.

Light at the end of the tunnel

In reference to Mark Gibbs' column "Appalled by things legal" (www.nwdocfinder.com/9522), thanks for highlighting this unintended consequence of security legislation. I wonder whether we will soon be subject to power-theft suits for plugging laptops or cell phone chargers into the very few available power outlets in airport lounges.

What is alleged to have been stolen in the case of Sam Peterson, who was charged with "stealing" free Wi-Fi (www.nwdocfinder.com/9523)? It is not property, and it is not intellectual property. I guess it is utility, in the sense that he competes for the available bandwidth and reduces the utility of the network. What would happen if a neighboring business put in a Draft N network with an edge router that extended the range of the café's network in distance and functionality? If it increased the utility of the network in another dimension, would it be theft?

Your analogy of the porch light reminds me of someone who lived a mile away from a place where I used to work. He complained to the company about light pollution from the building at night. Light spilled from a building might be seen as a resource or pollution, depending on your point of view. It's a bit like the definition of a weed — a plant growing in the wrong place.

Peter Quirk
Hopkinton, Mass.

Tune out, turn off cell phones

Mark Gibbs' column about green initiatives and the bees' Colony Collapse Disorder (www.nwdocfinder.com/9524) finishes with this sentence: "Let's just hope that cell phones aren't the cause of Colony Collapse Disorder, because switching them off could turn out to be one of the biggest business challenges we ever face."

Yes, it would be a big disrupter, but maybe for the better. I think we as a society have lost all reason when it comes to personal free time and the emphasis on instant or near-instant response and decision making. Why does everybody have to be available 24/7? Wouldn't some decisions be better if a little more time was spent in contemplation and review? (Think — some merger decisions before the "Internet bubble" and since.)

> **"We as a society have lost all reason when it comes to personal free time and the emphasis on instant or near-instant response and decision making."**

Don't get me wrong, I think all of the advances in communications have been for the better. It's the application of those advances that worry me. I've worked in IT since 1965 and have also owned and operated a network-integration company. We covered emergencies by assigning and scheduling personnel to be on call — not the whole team, just one or two people who carry a beeper or cell phone. (Both salaried and hourly personnel can be compensated for the inconvenience of being on call and receive additional compensation if they have to respond to a call.) The boss didn't call you at home just to get an opinion or ask a question. Those could wait until the next day.

Some people rudely interrupted even before cell phones and the like. In the '70s, one of my co-workers would call me, and if I didn't answer the phone because I was in a meeting, for instance, he would come to my office and stand in the door until I responded. I had to start ignoring him until the end of the meeting before he finally figured out how rude he was.

Tom Sawyer
Springville, Utah

E-mail letters to jdix@nww.com or send them to John Dix, editor in chief, Network World, 118 Turnpike Road, Southborough, MA 01772. Please include phone number and address for verification.

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Cisco software vulnerable

Cisco last week identified vulnerabilities in its Unified Communications Manager IP-telephony software — formerly CallManager — that could allow a denial-of-service attack or the execution of arbitrary code. UCM contains two overflow conditions that could let a remote or unauthenticated user initiate a DoS condition or launch inadvertent programs. A workaround exists for one of the vulnerabilities, Cisco says in an advisory on its Web site. The first overflow condition affects the product's Certificate Trust List Provider service. CTL Provider listens on TCP Port 2444 by default, but the port is user configurable. The second overflow condition affects UCM's Real-Time Information Server Data Collector service. RIS Data Collector listens on TCP Port 2556 by default, but the port is user configurable. **www.nwdocfinder.com/9566**

Capellas to take reins at First Data. Michael Capellas, formerly CEO of MCI and then Compaq, is making a comeback as the CEO-apparent to e-commerce and payment firm First Data. First Data is being bought by an affiliate of Kohlberg Kravis Roberts & Co., and Capellas will take over after the deal closes later this year. Meanwhile, Capellas will be coming up to speed by working with management teams from KKR and First Data.

Capellas will succeed Henry "Ric" Duques, who has been chairman and CEO of First Data since November 2005. Previously he was chairman from 1989 to 2003 and CEO from 1989 to 2002. Duques was brought back to lead the company in 2005, with the understanding that he would retire within two years. Capellas led MCI out of bankruptcy through its acquisition by Verizon last year. While CEO at Compaq from 2000 to 2002, Capellas negotiated the sale of the company to HP, then served as president of HP. **www.nwdocfinder.com/9567**

VeriSign restates earnings. VeriSign CFO Dana Evan resigned last week and the company has restated its earnings from 2002 to 2005, declaring an additional $160.3 million in expenses for stock-option compensation. Bert Clement, formerly VeriSign's senior vice president for finance and controller, has been named the new CFO. The change is the company's second executive resignation in three months. In late May, CEO Stratton Sclavos stepped down and was replaced by William Roper Jr. The financial restatement is the result of stock options having been granted irregularly, with incorrect dates, without required documentation, or with issue dates and strike prices that had been altered, the company said. An independent investigation found no intentional wrongdoing by Sclavos or Evan. **www.nwdocfinder.com/9568**

Oracle to release 46 patches. Oracle will release 46 patches on Tuesday for products that include its Oracle Database 10g, Application Server and E-Business Suite. Oracle Database will get 20 fixes, two of which address vulnerabilities that could allow remote execution of code on the network without authentication. The most serious of the database vulnerabilities is ranked medium in severity, according to the Common Vulnerability Scoring System. The E-Business Suite will get 14 patches, also for vulnerabilities that could be exploited over a network without a user name and password. Three of the four patches for Application Server fix problems that also could be exploited remotely. The remaining patches are for Oracle's Collaboration Suite, PeopleSoft Enterprise PeopleTools, PeopleSoft Enterprise Customer Relationship Management and PeopleSoft Enterprise Human Capital Management. (See related story about Oracle's 11g database, page 12.) **www.nwdocfinder.com/9569**

Spotlight DATA BREACH AT DISNEY

Movie club sees stolen-info horror show. An undisclosed number of Disney Movie Club members have received letters informing them that their credit card information was sold by an employee of a Disney contractor to a federal agent as part of an undercover sting operation, *Network World*'s Buzzblog author Paul McNamara has learned. The sting occurred sometime in May, while the letter — a copy of which was forwarded to Buzzblog by the security Web site attrition.org — is dated July 6. Disney insists earlier notification was not possible because of the dictates of an ongoing criminal investigation, and cites the same reason for declining to release details of the episode. A third-party contractor, Alta Resources, is taking the rap. **www.nwdocfinder.com/9562**

Wrong guy's data exposed. Receiving one of those "sorry about that" letters was Herve Roggero, managing partner with database security company Pyn Logic. "The first thing that came to my mind was 'Oh, no. . . . That's the real thing. . . .' I am used to seeing these letters since I am in the security business, but this is my first direct exposure," he said. What an interesting thought . . . a database security expert's credit card at risk caused by poor third-party data security practices. Funny and sad at the same time. **www.nwdocfinder.com/9564**

Another victim's tale. The letter says there's no evidence that the compromised numbers have been misused. One Buzzblog reader disagrees: "We received one of these notices yesterday. . . . About two or three months ago, we got word from Discover that an $8,000 charge had been made against our card. . . . Then we received the Disney/Alta letter. I thought: What Discover number? The old or the new number? So I called and spoke with a supervisor. They finally admitted it was our new Discover number. . . . In the 17 years we've had our Discover card, we never had a security issue. Then, in the space of two or three months, we had these two fraud events. I believe they are related." **www.nwdocfinder.com/9565**

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PEERSAY FROM OUR ONLINE FORUMS

■ **Call it asset recovery.** Connie Twynham notes the increasing retirement of baby boomers from the IT workforce and says managers need to figure out how to retain their knowledge when they leave. "It also sounds like IT managers need to begin to harvest the intellectual property that is on hard drives and in heads before it retires out the door. Too often critical information is only known by a selected few and not accessible to the 'new guy.' Where is your infrastructure documentation kept?" **www.nwdocfinder.com/9550**

■ **Attack of the botnets.** Some users say they are getting tired of scare tactics by vendors trying to sell them antibotnet wares — especially if they're smaller shops. Indy

writes it's really a question of good basic security: "We can't even have zombies without massive alarms, either the IDS, proxy server would get them, or the firewall would through up alarms through use of unsupported ports." **www.nwdocfinder.com/9551**

■ **What's slowing down IPv6?** Simon Hackett writes: "As an ISP, the major barrier I see to being able to promote end-to-end IPv6 to our customers is the current almost total lack of native IPv6 support in consumer CPE (in our geographic market, ADSL CPE, but broadband CPE in general). Sure, my Macs all support IPv6 natively. Sure, my international-extent Cisco Powered Network consists entirely of routers that can run native IPv6 too. But in between them are ADSL customer routers that only speak IPv4." **www.nwdocfinder.com/9552**

■ **Bidi bidi bidi.** Eric Piehl is a fan of TWiki, a Perl-based Wiki: "Within two weeks of joining the group, and already have important information splattered across a dozen e-mails of the hundred or so, I started harvesting the information and made myself a list. Pretty soon I found out about TWiki, and moved the information there. . . . I published it for others. Then had to develop a way to publish it for other team members in four . . . states and one other continent. **www.nwdocfinder.com/9553**

■ **Know anything about Liferay?** A user seeks some advice on setting up this Java portal application. **www.nwdocfinder.com/9554**

IT VIDEO

INTERVIEWS, THE COOLEST TOOLS AND MORE

COOL TOOLS:

RIM throws a sharp Curve

Program Director Keith Shaw checks out the BlackBerry Curve, which should make companies happy that want a digital camera on their e-mail device. **www.nwdocfinder.com/9559**

VIDEO:

Inside NAC testing

Get a detailed look at how engineers are making NAC systems compatible.

www.nwdocfinder.com/9560

TWISTED PAIR PODCAST:

IT spending grows — whoo-hoo!

Multimedia Editors Jason Meserve and Shaw discuss Google's Postini purchase and IT spending more on network gear, and try to design their own avatars for the Simpsons movie. **www.nwdocfinder.com/9561**

BEST OF NW'S NEWSLETTERS

Nortel shares wireless strategy

Plus: Wikis can improve the utility of e-mail

IT careers & training: Alcatel-Lucent launched what it claims to be the industry's first service routing-certification program for IP professionals in the service-provider market. The program aims to teach candidates the skills and competencies required to design, deploy, troubleshoot, and maintain fixed and mobile networks for next-generation services, such as triple-play, IPTV, VPN, VoIP over carrier networks, and video-on-demand. The equipment provider says the current crop of advanced-networking certifications, such as Cisco's CCIE and the Juniper equivalent, is focused at the IP-protocol level. Alcatel-Lucent's program teaches students how to design, configure and validate services on top of the network. Much of the focus will be to understand the relationship between services and the underlying protocol, according to the company. **www.nwdocfinder.com/9556**

Network/systems management: When it comes to network latency, nobody cares more than the financial-services industry, because even the tiniest slowdown in network performance can translate into millions of dollars in lost revenue. That's why it's a big deal when a leading stock exchange chooses a service provider for its network. The London Stock Exchange's 300-plus corporate customers can choose to access its Infolect real-time trading and share pricing information directly through its own IP network or through an approved service provider, such as Yipes. **www.nwdocfinder.com/9557**

Unified communications: E-mail is a fantastically useful tool for many applications, but project management using e-mail as the primary communications vehicle could use improvement. Deficiencies of e-mail for managing projects include the fact that only specified recipients are on the distribution list for updates, and lots of 'spammy' messages are sent (for example, the 'Thanks!' messages that are often sent via reply all in response to delivery of a draft document or other message). A better way to communicate is through the use of a wiki, a permissions-based Web page or Web site that lets users add various types of content, modify existing content, add Web links and perform other tasks. Wikis make it easier for groups to collaborate on projects and other work by improving the efficiency of communications between members of the group. **www.nwdocfinder.com/9558**

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_INFRASTRUCTURE LOG

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EMC upgrades garner praise on 'green' benefits

BY DENI CONNOR

Greater capacity, greener results: That combination of benefits stands as the core of a battery of major product upgrades coming from EMC this week, according to industry experts.

In a Webcast today, the company is expected to introduce a high-end Symmetrix DMX-4 storage system, as well as enhancements to its midrange Clariion array, Celerra network-attached storage (NAS) box and content-addressable Centera storage system. The higher-capacity drives being added to most of its systems are expected to consume 25% less power, according to EMC's estimates. The company also is adding security and availability features.

"A lot of the new features are related to power and cooling," says Stephanie Balouras, senior analyst with Forrester Research. "EMC is laying the foundation for a pretty strong campaign on green IT and how they can gain efficiencies in the data center."

Greg Schulz, senior analyst for StorageIO, says, "EMC is refreshing, enhancing and increasing both the scale-up/scale-down and scale-out capabilities of their systems. There is more meat on the bone than other vendors who have announced upgrades recently."

The company last introduced new Symmetrix gear 17 months ago, systems that used 500GB drives and had a maximum capacity of more than a petabyte. Hitachi, by contrast, last upgraded its Universal Storage Platform in May, one year after it upgraded its performance and added availability enhancements. In June, HP announced green features for its Enterprise Virtual Array, such as low-cost and slower Fibre Advanced Technology Attachment (ATA) drives.

Specifically, EMC is set to announce a DMX-4 array with end-to-end 4Gbps Fibre Channel connectivity. The new DMX-4 also lets customers intermix Fibre Channel and Serial ATA drives, and use increased-capacity 750GB drives that will lower power consumption by as much as 25%. Performance in the replication of data between arrays also will be increased, sources say. As promised in February at the RSA Conference, EMC also will integrate security features from its RSA division more tightly into the DMX-4.

The Clariion line of midrange storage arrays will see performance enhancements and now support RAID 6, which sometimes is called "double parity." In RAID 6, if two disk drives fail within a single RAID group, data can be rebuilt. RAID 6 support for the Symmetrix was announced earlier this year. Like the DMX-4, the Clariions will be integrated more tightly with security capabilities from RSA.

As for the Celerra NAS array, the capability to add block-level, storage-area networking support will be added but won't require a separate NAS gateway. The Celerra also will support thin provisioning and, according to sources, will be able to be set up in less than 15 minutes. In thin provisioning, a single pool of storage can be allocated virtually to applications and storage capacity can be oversubscribed to improve utilization. A single-controller-node Celerra also will be introduced — this array, the NS20, can be upgraded as needs require, to the level of the present dual-controller NS40, which supports as much as 32TB of capacity.

Finally, the Centera will include 750GB drives and be backward-compatible with previous Centera versions. EMC is also promoting several energy-efficient features of the Centera, such as drives that consume 25% less power. Like the DMX-4 and new Clariions, the refreshed Centera will include RSA security features.

With the expanded product line, EMC continues to bolster its hardware platform. The company maintained its lead in external disk systems with almost a 25% market share in 2006, according to Gartner. IBM followed EMC with 15.8% of the market.

Almost half of EMC's revenue is derived from its storage systems. In the first quarter of 2006, systems revenue represented 44% of total revenue, software licenses and maintenance revenue represented 40%, and professional services and systems revenue accounted for 16% of total revenue. ■

Making storage green

By using higher-capacity disk drives, customers can deploy fewer drives and hence, consume less power.

Vendor	Storage system	Drive Type
EMC	Symmetrix DMX-4	750GB Fibre Channel
HP	Enterprise Virtual Array	500GB Fibre ATA
IBM	System Storage DS8000	500GB Fibre ATA
Hitachi	Universal Storage Platform	500GB Fibre Channel

InBrief

Agency is just warming up, FBI warns spammers

U.S. Internet users will see a growing number of legal actions against spammers and operators of botnets, said FBI special agent J. Keith Mularski, speaking at the Federal Trade Commission's spam summit. The FBI has 70 active investigations into spam-related crimes.

The FBI has worked with the National Cyber-Forensics and Training Alliance, a partnership of law enforcement agencies, universities and private businesses, to identify spammers, he said. The NCFTA, launched in 2002, has identified more than 100 "significant spammers," including five tied to traditional organized crime, Mularski said.

Survey: Cable companies best telcos in satisfying customers

Cable companies lead the customer satisfaction rankings for telephone service in six U.S. regions for the first time, says J.D. Power and Associates. According to the firm's study released last week, cable companies offering bundled-service packages are proving to be tough competition for traditional telephone providers. The study finds that 86% of cable-based voice subscribers also subscribe to data services from the same provider — an increase from 71% in 2006. Conversely, 36% of telecom-based voice subscribers also use their provider to fulfill their data needs, which is an increase of 7% compared to 2006.

Apple fixes serious flaws in QuickTime media player

Apple has patched a number of critical flaws in its QuickTime media player. With the 7.2 update, users now can view videos on the full screen with the QuickTime player, but the software also contains a number of critical security fixes. In total, Apple has addressed eight security vulnerabilities with the release, which was made public last week. Four flaws are the result of memory-corruption or integer-overflow bugs that could cause the viewer to crash if QuickTime were used to view maliciously crafted movies or files. Another three critical flaws relate to design issues in QuickTime for Java. Attackers theoretically could exploit these flaws by posting malicious Java applets on a Web site, where they could then compromise a victim's computer.

_INFRASTRUCTURE LOG

_DAY 74: We're stuck dealing with multiple interfaces and apps. We can't find the relevant info we need. I feel like it takes six of us to do one person's job.

_Six Gils? They better not all have to sign my time sheet.

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Ballmer talks software and services

BY JOHN FONTANA

DENVER — Microsoft CEO Steve Ballmer said traditional enterprise software is the here and now but partners and users should start preparing for a world that will meld software and services. Ballmer laid out a road map for the future, not only for Microsoft but for all of the partners that build software on top of the Windows platform, during his keynote address at the company's annual Worldwide Partner Conference.

He said traditional software will continue to generate the bulk of sales revenue but that a software-plus-services world is not far behind.

Ballmer circulated among the crowd shaking hands and clapping to build excitement. He then jogged to the stage where he huffed and puffed and bellowed the virtues of the 8,000 gathered partners.

His message was for everyone to get on the software-plus-services bandwagon, Microsoft's version of the software-as-a-service trend now dominating industry hype.

In terms of the beginning of this new era, Ballmer said the time is now.

> "This is a long-term migration to bring the best of the Web together with the best of the enterprise."
>
> **Steve Ballmer**
> CEO of Microsoft

"We as a company are innovating, writing new software; we will be out with beta and design previews and we will be looking for feedback," he said. "The time to engage is now."

Ballmer said the future will include elements of today's technology combined with new service models. "We need the best of the desktop, the best of the enterprise and the best of the online world," he said. "We need to bring together rich user interfaces, offline and online access, and what I call personal integration to go in and bring things together, integrate them, store them and link them together in unique and arbitrary ways."

Ballmer said a good example today is Exchange and Outlook.

"Outlook is a rich-client app," he said. "Outlook Web Access is an AJAX app that looks exactly the same, talks to the same back end. Office Outlook Mobile is a device form factor, and Office Outlook voice access makes this successful even vs. the telephone. And as Exchange has moved out to live in a hosted form, it is moved to use HTTP protocols and is perhaps the closest model we have, I think, to what people will really want in the future. That is the user interface side."

Ballmer demonstrated Silverlight, Microsoft's new platform for rich Web-based applications, and said the back-end computation would not be done on corporate-deployed infrastructure but on large-scale services in the future.

"This is a long-term migration to bring the best of the Web together with the best of the enterprise," he said.

Ballmer said Microsoft will deliver on a services platform the same sorts of capabilities it delivers today in packaged software, such as Windows Server and Active Directory. He said Microsoft will offer personal services for individuals such as Windows Live and Office Live, business services, such as today's hosted Exchange, communications and collaboration services, and online services, such as Dynamics CRM.

He also mentioned the unveiling later this year of Version 1 of Windows Live Cloud Infrastructure services and said partners would be called on to help resell all these services. "This is the set of things on the radar," he said. But he added that partners would still have a lot of opportunity in the short run to sell current and upcoming technology such as Vista, Office, Windows Server 2008 and SQL Server 2008. "The business we do this year will continue to be on traditional on-premises software."

He said the consumer wave of services adoption is now underway and that enterprise are planning and testing hosted services.

"Many of the customers that I talk to are saying 'I am going with the new Exchange, the new SharePoint, the new Office, but I am going because I know you are gong to move those things to a hosted service and I want the benefits.' Priority No. 1 in terms of our long-term outlook is this transformation," Ballmer said. ■

Oracle touts security tests as draw to 11g database

BY CHINA MARTENS, IDG NEWS SERVICE

Oracle hopes that new security, testing and management features offered in Oracle Database 11g will lead users to migrate to the major release sooner rather than later.

Unveiled last week at an event in New York, 11g is Oracle's successor to the 10g releases 1 and 2 of its database. The vendor shipped the first release of 10g in February 2004. The company has worked closely with customers over the course of a lengthy beta testing program, which began in September, and some of those users noted that it had been hard to pin Oracle down on a launch date for 11g. The vendor only publicly committed to July 11 as the database's coming-out party just over a month ago.

"Oracle was a little bit more cautious, wanting to make sure they got the product right," said Ari Kaplan, president of the Independent Oracle Users Group (IOUG), which was heavily involved in the 11g beta-testing program.

IOUG members are bullish on their plans to move to the new database. A recent poll of around 400 of them indicated that 35% of respondents planned to upgrade to 11g within a year of its release, with an additional 53% looking to move to the new database in the next few years, according to Kaplan. This is an improvement on previous surveys about earlier Oracle releases, where the same percentage looked to migrate within the first 18 months following a new version of the database.

Kaplan was interested in the improved integration of 11g with Oracle's Audit Vault and Database Vault software. "There's a key flaw with all databases," he said. "If they're smart, a DBA [database administrator] can modify data and cover their tracks" because DBAs tend to have unlimited access to databases. The technologies in Oracle's vaulting software make that impossible because every action a DBA executes "goes into a lockbox that they are powerless to modify," Kaplan added.

Wachovia hopes to complete its internal process to certify 11g for use within the organization by year-end and then to have its migration efforts well under way in 2008, according to Ed Mulheren, senior database administrator at the financial services company.

He says the improved security features in 11g will help Wachovia meet the regulatory demands in the financial services market. Mulheren also welcomes 11g's support of case-sensitive passwords.

Arup Nanda, senior director of database

See Oracle, page 41

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Turbolinux
continued from page 1

Ecma's Open XML standard, known as Ecma-376, is based on Microsoft's Open XML, which is the default format in Office 2007. Microsoft submitted the format to Ecma, which approved it in December.

A straitjacket on innovation

Updegrove said the level of detail in the 6,039 pages of the Ecma-376 specification "will place a straitjacket on innovation, restricting any implementation to rigid conformance."

"As one who has long studied and promoted the importance of open standards, I urge [Massachusetts] to hold the marketplace to a higher standard and to refuse to include Ecma-376 on its approved list."

Bethann Pepoli, acting CIO of the ITD, said the commonwealth will not publish any correspondence it receives during the public-comment period, which ends July 20, until after a final decision on adoption is made at the end of this month. "We have received about 50 responses so far, but we have another week left," she said during a July 12 interview. Unlike Updegrove, those respondents have not made their comments public.

Pepoli said the response rate is not heavier than in 2005, when the state adopted ODF as an open format and received nearly 160 responses. The 2005 campaign sparked a firestorm of debate over open formats that eventually led to the resignation of both of the ITD CIOs who preceded Pepoli.

The proposal to adopt Open XML was made July 2 as part of Massachusetts's Enterprise Technical Reference Model (ETRM) 4.0, an architectural framework of standards, specifications and technologies that support Massachusetts' computing environment.

The draft listed Ecma-376 as one of its major revisions. Today, ETRM recognizes only ODF as a standard, open format.

Enter the translators

While Massachusetts is working through its decision on Ecma-376, Microsoft said last week that Turbolinux, the company with the leading Linux distribution in the Asia-Pacific region, would help develop new versions of tools to translate documents between ODF and Office 2007 Open XML.

Turbolinux distributes a version of OpenOffice.org, and the translator will add read/write support for Open XML.

The translator, called Open XML Translator 1.0, was made available in May for free on SourceForge.net, the open source software-development Web site where the first prototype of the translator was posted in July 2006. The tool was developed under the open source Berkeley Software Distribution license.

Linux vendors Novell, Linspire and Xandros are part of the Open XML Translator project. The three vendors also signed a cross-licensing patent deal with Microsoft before the June 29 release of the GNU General Public License (GPL) Version 3, which contains provisions against such patent deals.

Turbolinux was rumored to be considering signing a similar deal before the GPLv3 release, but an agreement between the company and Microsoft never materialized.

Microsoft also said that more than 1,150 partners from 50 countries and six continents have registered support for Ecma-376.

Two weeks ago, Sun released the first version of its own ODF translator add-in for Office. The Sun ODF Plugin works with Office 2000, 2003 and XP. ■

Open document efforts

Massachusetts is leading the charge for adoption of the Open Document Format (ODF) and on July 2 tagged a proposal to its electronic documents policy to add support for the OpenXML standard, which was first developed by Microsoft and standardized by Ecma International. Open document efforts in other states have not fared as well.

State	Status
Massachusetts	Working under limited deployment of ODF; Open XML open to public comment until July 20.
California	Stalled in committee.
Connecticut	Killed
Florida	Killed
Minnesota	Proposal watered down to mandate state's IT department study of open document issue.
New York	Bill passed Assembly and amended to Senate legislation on production and preservation of electronic documents.
Oregon	Killed
Texas	Killed

'Call my e-mail,' Yoomba says

BY CARA GARRETSON

Start-up Yoomba last week launched its namesake service that lets e-mailers place VoIP calls and exchange instant messages.

The year-old company positions its free service as an alternative to big portals, such as AOL, Google, Yahoo and MSN, which offer free communications services, such as IM, but only to registered users and only with other registered users, says Elad Hemar, Yoomba CEO.

In contrast, Yoomba operates a peer-to-peer service that lets any e-mail-address owner place a VoIP call or begin an IM session with any other e-mail-address owner, whether or not the recipient also is a Yoomba user, Hemar says. Yoomba offers other features, such as presence — letting users know who on their contact list is online — and popularity — resorting contact lists so those most often contacted rise to the top.

E-mailers become users by registering at Yoomba's Web site. Unlike other services, Yoomba doesn't require registrants to set up a logon and password. Instead, they enter their e-mail address and the registration process happens behind the scenes, where the company's server links that e-mail address with their IP address, Hemar explains.

The service places "call" and "chat" buttons in Outlook, Outlook Express and major Web mail interfaces to contact people on the user's contact list.

Using a user's existing e-mail contact list avoids what Hemar calls the "empty refrigerator" syndrome (you buy a new refrigerator and take it home, but it's useless because it's empty). Other services require users to populate new contact lists with other users who also use the service. Yoomba users can contact anyone with an e-mail address.

With other services, "you install their application, you register, you choose a password and at the end you get an empty application — you have to work for the application. With Yoomba, it works for you," Hemar says.

While images of e-mail spammers placing VoIP calls and sending IMs quickly come to mind, Hemar says the company is using the necessary back-end technology to prevent abuse. "We will look at abnormal usage or IP addresses moving around" and instantly shut them down, he says.

Yoomba plans to make money through targeted advertising in the user's e-mail interface, although the initial version has no ads. ■

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Spammers target PDFs

BY CARA GARRETSON

Security vendors and users agree that image spam is finally on the decline, but at the same time a new kind of spam is emerging that uses an attached PDF file to trick recipients into buying stock in a company.

Image spam, which has plagued antispam filters for the past year, is on the decline as e-mail security vendors have tweaked their products to block it, says Paul Henry, vice president of technology evangelism with Secure Computing. Image spam has long fooled filters because the message's text is embedded in an image found in an e-mail's body, and filters until recently couldn't decipher images. At the beginning of July it comprised about 38% of all spam and is now down to about half that volume, he says.

Stats from Symantec also show the volume of image spam, which the company says began to decline in May, has continued to shrink from its all-time high of 52% of all spam sent in January.

"Image spam seems to be decreasing . . . Antispam software, [real-time black lists] and other filtering techniques have done a good job at decreasing the previous spammers' attempts; it is now time for them to find a new avenue to annoy us," says Jim DeSantis, enterprise messaging architect with Abhir Technical Consulting.

Beginning to take image spam's place is PDF spam, in which the spammer sends an e-mail with a PDF attached — which most spam filters can't read — that attempts to convince the recipient to purchase stocks. So far security vendors are reporting two types: a professional-looking PDF of a newsletter pumping a German company's stock that security company IronPort says was sent more than 5 billion times in its first few days; and a more rudimentary PDF attachment containing text that pumped a stock that Symantec says was sent to more than 30 million users over a 10-day period in late June.

So far, PDF spam isn't approaching the volumes that image spam reached — Secure Computing's Henry says in early July it accounted for about 4% of all spam sent — yet this new spam trick could prove to be significantly more malicious. Henry says proof-of-concept code exists that demonstrates security vulnerabilities in PDF files, which means PDF spam could carry malware that is secretly downloaded on the recipient's PC. Image spam was only dangerous to those recipients who bought the stock that messages were touting.

"I haven't seen any malware yet in PDF spam," Henry says.

PDF spam does hold some potential for spammers who are advanced enough to take advantage of the technology, some say.

"Simply attaching a PDF to an e-mail and randomizing the size and name of the title, to me, does not seem all that impressive, but it seems to be working," says Kyle Ohme, director of technology with W3i.com, an interactive marketing services provider.

"I'm interested to see how far this will go, as some may start to use some of the more advanced functions of Adobe to place beacons and other tracking mechanisms that have become limited in the past years," Ohme says.

Malware-laden or not, PDF spam is an example of how spammers will continue to innovate in order to get their messages across.

"The tools are definitely getting smarter . . . the better the tools the more creative spammers will be," says Sharon Finney, information security administrator with Dekalb Medical Center in Decatur, Ga. "I am seeing some increases in PDF spam, but no real volume yet. All spam is a nuisance regardless of the technology behind it." ■

German Stock Insider - OYQ.F (TKMD.F)

Thursday 28-JUN-2007

Talktech Telemedia, Inc - HUGE GAINS EXPECTED!

Volume 4, Issue 6

Talktech Telemedia expects gains of 300% in next 5 trading sessions!

In this edition of German Stock Insider we are featuring our winning pick of Talktech Telemedia, Inc (Frankfurt: OYQ.F).

With an excellent management team and a huge marketing campaign starting next week, we are expecting our German readers to jump on board this amazing opportunity before American investors see this, causing HUGE price increases in the stock.

At present OYQ.F (TKMD.F) is trading at a huge discount. It was recently trading at €1.00 and currently trades at approx €0.30. We are expecting this stock to jump back up to over €1.00 by early next week. This will net our readers gains of over 300% in a few trading sessions. If you plan on seriously considering OYQ.F (TKMD.F) you should strongly consider getting in early on before next week as we are expecting this to start trading up as early as Thursday 20-JUN -2007.

We strongly urge you do your own research on Talktech Telemedia before making any investment decisions. We feel that they are going to be making some major moves in the coming days adding HUGE shareholder value and again causing an increase in share price.

As we have already stated, we are comfortably estimating that Talktech should be trading at over €1.00 by early next week, however, we feel it could be as high as €1.25 or so by the end of next week (over 400% gains on today's price)

In the fast paced world of the German Stock Exchanges, we strive to bring you the very best the Frankfurt Stock Exchange has to offer. We strongly urge you to call your stock broker and ask them about OYQ.F (TKMD.F). Add it to your portfolio today.

300% gains are expected on this one - DON'T LET IT PASS YOU BY!

TOP REASONS TO CONSIDER OYQ.F:

- Top management team in place.
- Huge Investor Awareness marketing campaign starting next week.
- At least 300% gains expected in the next 5 trading sessions.
- Could go as high as €1.25 by next Thursday (1 Week)

Company Info

Company Name: Talktech Telemedia

Symbol: OYQ.F (TKMD.F)

Recent Price: €0.30

5 Day Target: €1.00 - €1.25

Recommendation: Strong buy to €0.85

Talktech Telemedia is expecting huge gains - upwards of 300% in the next 5 trading sessions.

HUGE INVESTOR AWARENESS CAMPAIGN STARTING ON MONDAY IN US MKTS

We are expecting a Huge Investor Awareness campaign starting on Monday of Next week in the US markets. This will put OYQ.F (TKMD.F) in front of Millions of investors, institutional investors such as banks and fund managers. This will have a HUGE impact on stock price causing extreme gains early next week. We strongly believe that we are to expect at least €1.00 by early next week possibly €1.25 and more by the end of the week. This is very simple supply and demand at work and we are outlining an amazing way for you to get 300%-400% returns in a very short period of time. We will be sending you a follow up report later this week and another one early next week to keep you updated on share price so that you can see where everything is periodically. We hope you will make out very well like our previous readers have in the past and best of luck to you in all of your trading endeavors!

DISCLAIMER: This is not an offer to buy or sell any security. German Stock Insider discloses that they were paid ten thousand Euros for distribution of this report. This report contains forward looking statements. Please do due diligence before investing in any company. Best of luck!

An example of a PDF attached to a spam message. The PDF is designed to look like an investor newsletter, attempting to convince the recipient to buy stock in this German company.

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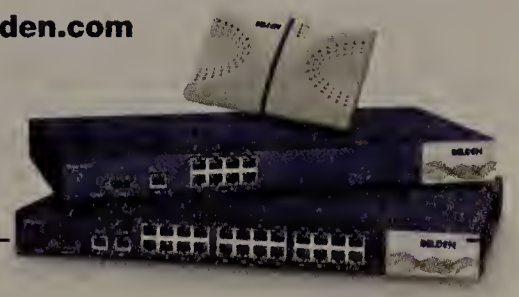

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Wireless VoIP

continued from page 1

Earlier this year, Nokia demonstrated dual-mode support for Cisco and Alcatel VoIP equipment, setting the stage for an expected jump in the popularity of these roaming devices. Siemens and DiVitas Networks announced similar dual-mode capabilities earlier this year (www.nwdocfinder.com/9535).

According to Infonetics, demand for dual-mode phones will increase over the next two years as demand for single-mode Wi-Fi handsets dips. In a survey earlier this year, 23% of respondents said they use dual-mode phones now, and that will grow to 30% in 2009. In the same group, 45% said they use single-mode phones now, and that will decrease to 34% in two years. The reason is that as dual-mode phones become more available and affordable, businesses will prefer them to single mode, says Mattheus Machowinski, the Infonetics analyst who wrote the report.

Nortel sees the uptake of wireless as much broader issue, recently announcing plans (www.nwdocfinder.com/9536) to incorporate wireless capabilities in its network Ethernet access switches, so even workers tied to desks will have voice-over-wireless-LAN (wireless VoIP) phones and computers. The architecture would be appropriate for new sites where installing wireless gear would eliminate the need for and expense of installing network-access wiring, the company says. Nortel calls this architecture Unwired Enterprise, and products that support it are scheduled to ship next year.

In a nutshell, dual-mode phones are VoIP PBX extensions while on the WLAN and standard cell phones outside WLAN coverage areas. Avaya already teams with Motorola to pass calls uninterrupted between the two types of wireless network.

Upgrading WLANs

Before dual-mode wireless can become mainstream, businesses have to solve a set of problems, including corporate-infrastructure upgrades, service-provider initiatives and the fact that only the most mobile workers need the technology, experts say.

An upgrade of WLANs may be necessary to support VoIP, making some businesses reluctant, says Phillip Redman, an analyst with Gartner. "Most enterprises are hesitant to put in voice over wireless because it means adding more access points to add capacity and coverage," he says. "Wireline is already installed and inexpensive, and it works. Unless they have a need for a high degree of mobility, they're not looking to transfer it to wireless networks."

Dual-mode phones that hand off calls from Wi-Fi to cellular networks as users move around could be part of the answer, but that also will require investment by businesses for the gear needed to transfer calls between networks. That means picking vendors carefully, experts say. The reason: so few U.S. carriers offer a network-based service that supports these handoffs, says Lisa Pierce, an analyst with Forrester Research. T-Mobile recently announced such a service, and at least one major U.S. carrier plans such a service later this year, she says, but declined to say which it is.

Bridging wireless VoIP to cellular networks is of interest to businesses with very mobile workers — medical facilities, factories and retail stores. Overall, that is a small percentage of workers. Infonetics recently found that 6% of users in companies surveyed use wireless VoIP, and that is expected to double in the next two years.

More employees going mobile

Larger businesses are more likely to use wireless VoIP because they have a better chance of having at least some employees who need to be mobile, Machowinski says. But because need for the technology is small in most businesses, they steer clear of investing in it, Redman says.

For some business users, dual-mode phones are important because they can reduce the number of devices individuals have to carry, Machowinski says. "Single-mode handsets aren't that interesting to some businesses, because it means carrying around one more device," he says.

For other users, the phone won't be an issue. "A lot of [wireless VoIP] pickup will be on softphones running on a laptop," he says.

Medical mobile

In medical settings, however, wireless VoIP phones are valuable to nursing staffs, who spend their days moving from room to room. For instance, University of Texas Southwestern Medical Center in Dallas has deployed 600 wireless-VoIP phones to hospital workers on campus, says Elwyn Hull, the center's director of telecommunications.

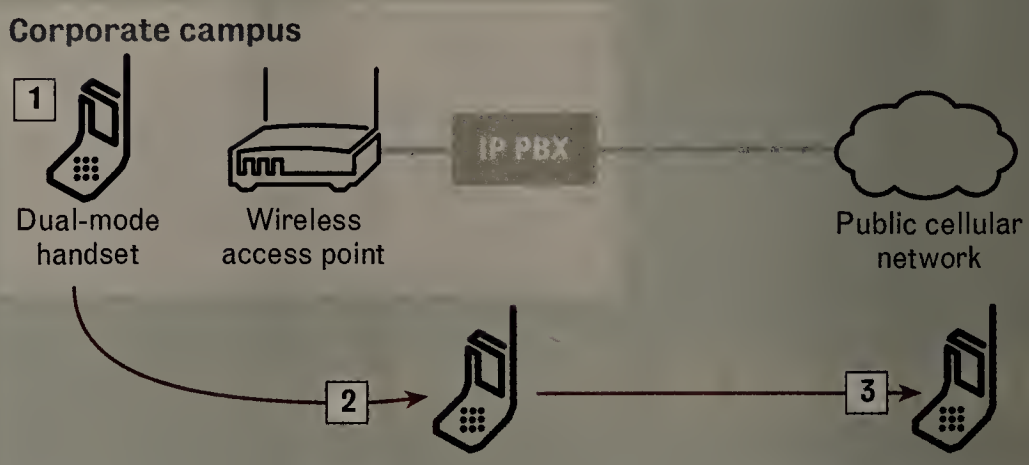
"I don't know how you quantify the savings in nurses' time, but certainly that is the benefit of these phones," Hull says. "It's saving them hours every day." Rather than run back to nursing stations to check voice mail or return pager calls, they receive more calls directly on the wireless phones as they make rounds, he says. "We can respond more quickly. It's frustrating to call someone for a quick call and get voice mail," he says.

The school bought two affiliated hospitals in 2004. One of them, St. Paul's, had installed traditional 900MHz wireless phones that were integrated with the hospital's Nortel PBX. These phones required separate trans-

See Wireless VoIP, page 30

Wi-Fi gets together with cellular

With dual-mode wireless phones, users can travel between Wi-Fi networks and cellular networks without having to redial calls.



1. When it is located within a Wi-Fi network, the dual-mode phone operates as a VoIP handset.
2. As users pass from Wi-Fi range, they trigger a command to the IP PBX that sets up a call to the same party via the cellular network.
3. After the phone is out of Wi-Fi range, the PBX conferences together the handset with the cellular connection. Users experience a break in the connection that lasts a few seconds while the two ends of the call are linked.

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7 WONDERS OF THE INTERNET

BUZZ BLOG

On July 7 — 07/07/07 — The New 7 Wonders of the World were anointed in Lisbon, Portugal. Architecture: Could anything be any more 20th century? Here at *Network World*, we enlisted the help of my e-mail list, the Buzzblog Brigade, and took on a more modern assignment: The 7 Wonders of the Internet. The only rule I offered our voters was that there would be no rules — and no real vote. The results are something of a Buzzblog community consensus influenced by my personal biases. BY PAUL MCNAMARA

Go online at www.nwdocfinder.com/9549 to post your comments on the 7 wonders of the Internet.

7. Get lost

There's just no excuse for getting lost these days, what with MapQuest, MapsOnUs and Google Maps at your fingertips. GPS may be better, but GPS ain't free.

WHY THEY CHOSE MAPQUEST

Members of our nominating committee explain why they chose mapping capabilities — MapQuest, Google Maps and the like — as one of their personal 7 Wonders of the Internet.

Johna Till Johnson: MapQuest: Reason: impact on daily life. Getting directions from people is now obsolete. GPS is still one of those things that early adopters have.

Liam Noonan: Online maps: Where is that standing stone? How do I get to that concert venue? What's happening in Area 51?

Phil Daley: Google Maps: Far better (visually and for information) than the other has-beens MapsOnUs, MapQuest, etc. Radar weather-system maps: I use Intellicast.com. State-park reservation systems that give you a park map, and you can reserve a particular camping site.

6. Alphabet soup

On DNS, our panel waxes wondrous: "Simple, elegant, yet robust, and it still works"; "No DNS, no Internet." There's rhapsody over HTTP: "Has moved the Internet out of the university and into the living room. Can you imagine Everyman using Archie, Gopher and command-line FTP?" Let the masses belly-ache about acros: Geeks know better.

WHY THEY CHOSE DNS AND FRIENDS

Members of our nominating committee explain why they chose alphabet soup — the technology and technologists behind all those acronyms that baffle civilians — as one of their personal 7 Wonders of the Internet.

Jim Albright: IP protocol: The Internet in its infancy needed an addressing scheme that was routable and scalable. Behold what may be the only technology to survive unchanged since those early days. There may be a better way to handle global addressing through binary numbers, but no one has been able to come up with it yet. And HTTP: The hypertext language, with its graphics, browsers and hyperlinks has moved the Internet out of the university and into the living room. Can you imagine Everyman using Archie, Gopher and command-line FTP? I can't. By making the Internet user-friendly, this technology has caused an explosion in the markets for PCs and commercial ISPs, and made a Web page almost a requirement for any business. The Internet was around for roughly a quarter of a century before the World Wide Web, and was primarily the province of research institutions and government agencies. The average person had not heard of it. In less than half that time, it has become a household word. Without HTTP, it would still be the obscure domain of the technology elite.

Liam Noonan: DNS: Simple, elegant, yet robust, and it still works. VoIP: Now all the Irish expats can talk to mammy in Ireland for free or a ridiculously low price.

John Gog: The Domain Naming System: I don't think anyone beyond the tech-minded ever stops to think about how the Internet would be only the province of geeks if DNS didn't work. In fact, it's probably safe to say that without DNS, there would be no practical World Wide Web.

5. Bad to the backbone

Spammers, scammers, stalkers, script kiddies and evildoers of every stripe: Given the danger, it's a wonder anyone dares plug their PC into a wall socket, never mind the Internet. Think about it: Every time you log on, you're giving the bad guys the finger.

WHY THEY CHOSE SPAM, CYBERCRIME AND SO FORTH

Members of our nominating committee explain why they chose spam, cybercrime and all the other online bad stuff as one of their personal 7 Wonders of the Internet.

Ken Diliberto: Server and network power: Isn't it amazing how well the Internet works even though 99.99999% of the 'Net traffic is spam? It's a wonder that mail still gets delivered.

John Gog: Spam: You didn't say these had to be good things. Spam is a marvel. It's the kudzu of the Internet. The fact that the most prolific use of bandwidth and e-mail resources is junk mail boggles the mind. We keep hearing that it will decline, yet it continues to increase as ever-more-gullible users hit the Internet.

Alan Portman: Spam: "Spam?" I hear you ask. Yes, spam. I have had an e-mail address for about 15 years. I remember one of the first "mass postings" to all of the Usenet user groups. Yes, the guy was flamed, but he made sales. If spam were not effective, it would stop being used. So, as long as you will send somebody money for fake Viagra or buy a stock in a company that can't spell, spam will be with us

4. For sale

Online shopping is the "Alice's Restaurant" of our time: You and your credit card can get anything you want — from a Zune on Amazon to an abode on Zillow. Apricots to ziti, if you're city folk. Never leave your house. Nirvana.

WHY THEY CHOSE E-COMMERCE

Members of our nominating committee explain why they chose e-commerce and online shopping as one of their personal 7 Wonders of the Internet.

Jack Miller: Amazon: The first real proof that the Internet was truly a retail giant. EBay: The second site that proved the power of the Internet — the world's largest garage sale.

Liam Noonan: Tech review and comparison Web sites: Shop smarter and save money.

Alan Portman: Expedia, Orbitz and all of the other travel sites: The ability of just about anyone to create a complete travel itinerary and book it all on your own has changed the travel industry. Just as the automobile drove the blacksmiths and saddle makers out of business, travel Web sites (aided by airlines seeing a way to make an extra nickel) have all but killed travel agents.

3. Cats in sinks

Catsinsinks.com. The site's OK — if you're into cats. In sinks. But the idea that no matter what your passion, interest or curiosity, there's a site out there for you and the like-minded? Well, that makes the list — and, of course, there's porn.

WHY THEY CHOSE CATSINSINKS.COM

Members of our nominating committee explain why they chose Catsinsinks.com — or rather, the idea that there's a site out there like it for every interest imaginable — as one of their personal 7 Wonders of the Internet.

Joel Snyder: Catsinsinks.com: I think that this is a particular wonder because it's a use of technology so far different than what it was originally intended. If, for example, you were to ask any Web person 10 years ago, "Do you think that there will ever be a Web site with nothing more than pictures of cats in sinks?" the answer would have to have been, "No, are you kidding?" Everything else, from porn to Google to e-commerce, could have been reasonably foreseen with a bit of luck. But Catsinsinks.com? No.

Alan Portman: OK, I will say it: Cyberporn: Easily the most profitable of all Internet businesses, cyberporn has changed America. The ability for anyone to view the erotic images of their choice in the privacy of their own home is now a $500-million-a-year business. The porn industry has always been at the forefront of technological change. Porn availability on VHS allowed VHS to overshadow the superior technology, Beta. Vivid Entertainment has chosen HD-DVD for their content; anybody want to bet who wins the HD-DVD/Blu-ray duel? Adult content is moving to mobile devices. Look for mobile-phone porn to be a $50-million-dollar industry in the next five years (see Electronic Business, July 2006).

2. Hi

E-mail gets a bad rap. It's become trendy of late to claim a break from the chains that bind us to our in-boxes and CrackBerries. Too much time, too much spam, too much connectedness: Those who make the claim sound like those who say they don't watch TV — unconvincing at best, if not pretentious.

WHY THEY CHOSE E-MAIL

Members of our nominating committee explain why they chose e-mail, despite its downsides and challenges, as one of their personal 7 Wonders of the Internet.

Paul Hoffman: Internet mail: Even with horrendous levels of spam, it still remains the most common way for two people to communicate on the Internet. If for no other reason, its resilience makes it a wonder.

Jim Albright: E-mail: In the dozen years I've been in the networking field, e-mail has grown from an afterthought ("We have a network anyway, so we might as well put e-mail on it") to one of, if not the primary way in which people communicate. Many companies consider it to be one of their most mission-critical applications. And the proliferation of wireless devices have practically rendered "store and forward" an obsolete term, as users clamor for real-time e-mail delivery. Fortunately, the boys down in QoS still don't see it that way.

1. Google

That haystack just keeps growing. There's more to search than Google, granted, but when you've become a verb, you've earned the right to represent on this list the single most critical capability available: finding stuff. It's a never-ending wonder how many needles can be found — or how we settled bar bets before search engines.

WHY THEY CHOSE GOOGLE

Members of our nominating committee explain why they chose search capabilities, as embodied by Google, as one of their personal 7 Wonders of the Internet.

George Grenley: Google: What can I say? Google is now a verb, and is essential. There may be a better search engine than Google someday, but whatever it is, it will be the wonder of the world. I'll go so far as to say that Google is so far in the lead as a Wonder of the Internet that the rest of these items should be numbered 12 through 17, not 2 through 7.

Do you need an $800 VoIP phone?

We take a look at SIP to the desktop and how to run a business with Skype

BY PHIL HOCHMUTH

VoIP can raise a number of concerns in the corporate network environment. In the first part of our Six Burning VoIP Questions series, we looked at some of the more high-level issues, such as trusting Microsoft with VoIP implementations and whether VoIP is a secure technology. In this final installment we look deeper at the technology on your desktop and how you can effectively run your business on VoIP.

1. Do I need a $800 IP phone?

Flat-screen color display ... Gigabit Ethernet ... Linux operating system.

These aren't specs for high-end gaming PCs or enterprise network appliances — the features describe Siemens' OpenStage Session Initiation Protocol (SIP)-based IP telephone. While clearly aimed at the high-end user, this type of desktop IP phone reflects the growing horsepower, features and capabilities being packed into desktop IP handsets. Whether these minicomputer telephones make users more productive or add business value to an IT deployment is debatable, some observers and users say.

BURNING QUESTIONS: VoIP

Second of two parts.

"Many enterprises are dramatically overspending on desktop IP telephones," says Jeff Snyder, an analyst with Gartner. "Spending $700 to $800 on a beautiful IP phone for the desktop is serious overkill."

The reason is that many users are not yet rolling out applications that take advantage of advanced capabilities these phones provide. While some phones support Web browsers, XML and Java applications, the effort and cost of tying back-end applications and systems into an IP phone are hard to justify.

"The most common application people use on phone displays is calling up past-call lists," Snyder says. "They don't really have any enterprise applications that merit having a large color screen on the phone."

This is not to say there is no value in tying applications to IP phones with displays. Credit Valley Hospital in Mississauga, Ontario, conducted a pilot project to push corporate directory information down to more than 1,000 Nortel IP phones deployed throughout the hospital. An appliance from Citrix called the Net6 converted directory data into a format that is readable and navigable by IP phone screens and interfaces. The project's aim was to enable doctors, nurses and other staff to quickly look up information when not at a PC.

The problem is that the hospital has 2,500 phones, with more than half being non-IP phones, or IP phones that cannot support the directory tie-in feature.

"We could not justify the extra licensing to roll out this feature to all those new IP phones," said Tim Oliwiak, the hospital's voice systems analyst at a conference earlier this year. "If we deploy a feature like this, people will become familiar with it, and it has to be everywhere." As a result, the hospital pulled back on the IP phone/directory rollout.

Gartner's Snyder says the integration of IP telephony with corporate applications and databases has real value and is an emerging trend inside databases. "By the time these types of [converged] applications become pervasive, [most] users will be accessing them through softphones on their screen" or through enterprise applications, which are tied to VoIP-based features. Salesforce.com is an example: recent tie-ins with Siemens and Cisco let users make calls from client record screens via a Web interface.

Many enterprises and organizations are avoiding the licensing issue facing the Ontario Hospital by choosing low-cost, generic IP phones running SIP. Part of the high costs of deploying IP phones also comes with licensing. While TDM phone systems are also licensed on a per-seat basis, other users are finding ways around these costs as they move to VoIP.

Sam Houston State University in Huntsville, Texas, uses Cisco IP phones running a generic SIP software stack, which enables the handsets to access an Asterisk IP PBX. The school had partially deployed an older-generation Cisco CallManager system, which used Cisco's proprietary "Skinny" call control protocol. This required each phone on the system to be licensed in order to register with the call server.

"The massive amounts of licensing fees required to keep the Cisco CallManager network up and running" was one of the main reasons the school went to the SIP/open source approach, says Aaron Daniel, senior voice analyst at the school. Because Asterisk is open source, this eliminates the need to license thousands of IP phones, which would have been required to run on Cisco's CallManager IP PBX.

Network World VoIP event

Managed well, VoIP makes your enterprise a lean, mean, productive machine. Mishandled, it has the potential to compromise every core value. Learn right from wrong. Join us at IT Roadmap: Dallas Sept. 6.

www.nwdocfinder.com/9157

2. Will SIP ever be ready for the desktop?

The VoIP industry has touted SIP for most of this decade as the future of IP telephony. Proponents say the open-standard nature of SIP, its flexibility and elegance, are among its virtues (besides being a great acronym for marketing PowerPoints and trade magazine headlines).

The problem is that most companies must rely on proprietary VoIP protocols, or vendor-tweaked (and thus, vendor-exclusive) versions of SIP in large IP telephony deployments.

"SIP really describes a limited number of features in terms of it being an industry open standard," says Anne Coulombe, senior product manager at Avaya. "So invariably, a proprietary protocol will have more features."

Most major vendors, such as 3Com, Avaya, Cisco, Nortel, Mitel Networks and Siemens, which ship phones that run proprietary VoIP protocols also offer standard SIP software stacks that can be loaded onto the devices. This allows the phones to work with "pure" SIP back-end IP PBXs or media servers. Even the open source Asterisk IP PBX system — touted by users for its openness and flexibility — has its own non-SIP protocol for communicating between servers and endpoint devices. (Although Asterisk fully supports SIP-based endpoints and peering servers.)

The most important desktop phone features vary widely depending on users. People who live on conference calls want a button that can hold all parties without dropping anyone. Those who pop in and out of the office need a message-waiting light. This is why protocols such as Cisco's SCCP, Siemens' CoreNet and others still come as standard on their respective IP phones and PBXs.

But the demand for SIP is increasing as users look to integrate presence and multimedia features into a VoIP network. To accommodate, vendors also are creating proprietary extensions to SIP to give the protocols a few extra features — enough to make or break an enterprise VoIP system sale, in some cases.

"It's commercially unreasonable to say to customers that they must be purists about a certain protocol," Microsoft's Duffy says. " If we need to make changes to a protocol, or other scenarios, we'll do that" to meet customer's needs, he says.

Avaya calls its SIP extension Avaya SIP Telephony, which extends the number of fea-

tures a SIP phone supports to around 62 — twice as many as are available on basic IETF-based SIP phones.

Vendors such as Avaya and others also are extending basic SIP phone functionality with feature access codes. This involves passing dual-tone multi-frequency (DTMF, or tone-based signaling based on dial pad buttons) signals through standard SIP packets to a PBX or IP-PBX back end, which lets users of SIP-based phones access features normally available only to proprietary systems.

"So features you could normally turn on by dialing 1234# on your phone, it will turn on the back end," Coulombe says. "That's 100% SIP-compliant, but you've actually extended the capabilities of all SIP phones attaching to the [non-standard] back end."

Some users rolling out large deployments of SIP endpoints say a lack of features is not an issue. (Albeit these users say they chose to use SIP phones in basic office settings where advanced PBX features are not commonly used.) The University of Pennsylvania is one such organization in the process of deploying thousands of IETF-standard SIP telephones to faculty and staff offices at its Philadelphia campus locations.

"The truth is that the vast majority of services people want, we can provide," says Deke Kassabian, senior technology director at the university. "And the ones we can't yet provide, we're working on those."

Bridged-line appearance and busy-indicator lights are among some features that are hard to do well in an open, standard environment right now, he says.

At toolmaker Stanley Works, plans are underway to widely use Polycom IP phones with a SIP-based VoIP system from Interactive Intelligence. IT executives at the company have said they expect to see cost savings of $200 to $300 per seat in using the SIP-based phones vs. proprietary VoIP handsets and systems offered by Cisco or Avaya.

"I have not heard of any problems or issues about shortcomings in terms of SIP's features," says David Cote, global telecommunications manager for the company.

As SIP becomes more mainstream, increased interoperability and the expansion of features should be expected, industry insiders says.

Microsoft's Duffy says users "won't be having conversations about SIP interoperability in five years." Over time, VoIP systems and SIP will operate similarly to Web applications over TCP/IP. "No one would for a minute realistically wonder if those systems would work."

3. How do I run my business on Skype?

Skype, which claims around 100 million registered names, estimates that 30% of its installed base are business users. The free VoIP tool is utilized widely by road-warrior employees with laptops, as well as small businesses and teleworkers.

Some companies are even patching together systems that integrate Skype into larger VoIP systems. Big cost savings can be gained this way by using Skype to connect branch offices, while still maintaining the feeling of working on a business telephone, as opposed to a PC-based softphone, which some employees may find unfamiliar.

Chicago to China: a case study

One such company is Eastern Accents, a Chicago home furnishing manufacturer, which has a growing presence in China. It started using Skype to connect to China years ago and recently took its Skype/telephony integration to the next level.

Elvin Rakhmankulov, the company's director of IT, wanted a way to inexpensively and reliably connect its growing China operation with the company's 200 employees in Chicago and other domestic satellite offices. Eastern Accents has a 3Com NBX IP PBX system, which easily ties together its U.S. branch offices over the Internet. Sites in Los Angeles and North Carolina get 3Com IP phones, which link back to the Chicago NBX through VPN links.

When Rakhmankulov tried this setup to connect to China, he hit the wall.

"The calls were not being blocked, but the latency, the speed of the network, was really slow," he says. "Nobody knows for sure why there is so much latency for Internet traffic going into and out of China. But any Internet communication to China is a huge issue. When the signal goes from the United States to China, it really takes a while."

Rakhmankulov discovered the free VoIP client worked fine, passing through firewalls or other gateways without any perceived latency to the calls. "Skype does not need a lot of bandwidth. At the same time it works with China very well," he says. "The quality of the calls is very good."

Employees used PC-to-PC Skype, but Rakhmankulov wanted to integrate communication lines as part of the businesses phone system. "It would be much easier for most people because they don't have to have headsets on their computers, microphones and all that stuff," he says.

Rakhmankulov rigged his system by attaching the 3Com NBX to an appliance from VoSky Technologies, which lets employees make Skype calls from 3Com IP phones on desktops. The 3Com NBX connects to the VoSky Exchange 9000 appliance through four analog trunks. A USB link from the VoSky box also connects to a dedicated Windows XP machine with four Skype accounts running simultaneously. The VoSky box has a database that converts the Skype user names of the employees in China into extension numbers. When Chicago users dial eight and then the extension from a 3Com phone, it connects to the employee in China using Skype on a PC with a headset.

"Users don't know anything about it in the background," he says. "If they want to make an international call, they dial eight, and it goes through Skype." His next plan is to ship a 3Com NBX, IP phones and a VoSky appliance to the office in China, and replicate the setup in the Chicago office so all employees can talk on actual phones, instead of a mix of PC headsets and handsets.

Overall, Rakhmankulov estimates he's cut his telephone bills a third by using Skype to call China. Using Skype on the public Internet is also a big cost saver vs. setting up a private point-to-point IP line to China for VoIP.

For around $5,000 a month, "major providers like Sprint or AT&T can give you an MPLS channel, which is equivalent to T-1 speeds but [on a] dedicated channel between the offices," he says. Even with such a service, "I wouldn't be sure that VoIP would work perfectly over such a channel to China. It would work, definitely better than the Internet, but there are still latencies there. And it's really a lot of money."

Security in mind

Experts say that tightly controlled Skype usage, such as the system at Eastern Accents, is what companies should strive for in using Skype. While it can be a useful tool, IT administrators should get out in front of Skype usage before discovering the software downloaded on laptops and PCs without authorization.

"Because the Skype client is a free download," says Lawrence Orans, an analyst at Gartner, "it is widely used and most businesses have no idea how many Skype clients are installed on their systems or how much Skype traffic passes over their networks."

Skype currently has seven security bulletins on its site relating to known security flaws or exploits of the software. Exploits of vulnerabilities and bugs range from potential system crashes to execution of arbitrary code on a Skype PC. Skype's peer-to-peer file-sharing capabilities compound the risks associated with the software.

The growing number of security holes in the program "highlights the risk of not establishing and implementing an enterprise policy for Skype," Orans says. "If after weighing the risks, a business decides to allow Skype use, it should actively manage version control of the Skype client — and its distribution to authorized users — using configuration management tools." ■

ONLINE: Missed Part 1?

Find out the answers to these questions from the first part:

- Can I trust Microsoft with VoIP?
- What happens when I dial 911?
- Is VoIP safe?

www.nwdocfinder.com/9528

Illinois resurrects PKI program

Program once hailed as leading-edge back on track after stumbles

BY ELLEN MESSMER

In 1999 Illinois placed a big security bet on public-key infrastructure (www.nwdocfinder.com/9546) for e-commerce, but three years ago its PKI project faltered, as state agencies foundered badly when issuing the digital certificates to residents.

It wasn't supposed to turn out that way. The state's landmark Electronic Commerce Security Act (www.nwdocfinder.com/9547) had given digitally signed documents an equal legal status to wet-signature paper ones in 1999, putting Illinois on the cusp of the PKI revolution. "Over the next 18 months we hope to distribute over a million digital IDs to citizens and businesses to enable them to do business with the state of Illinois as an integrated secure Web-driven government," proclaimed then-Governor George Ryan.

The idea was to decrease paper-based exchange in favor of electronic documents in every sphere of government on every level by having citizens submit digitally signed forms instead of written signatures.

In early 2001, that still sounded possible, as Illinois had the technology contracts in place — primarily one with Entrust — making digital-certificate registration, issuance and management software available to state agencies. But the agencies were flummoxed by the intricacies of PKI, in which sender and recipient can exchange encrypted and signed documents through a public-private key pair also used to verify that contents haven't been altered.

"By 2003, we had less than 6,000 certificates issued," acknowledges Doug Kasamis, acting deputy director of the state's IT department, the Central Management Services (CMS) Bureau of Communication and Computer Services.

More wheels were coming off the wagon as Gov. Ryan, once praised for setting up a cabinet-level chief technology office, left office under a cloud of scandal that year, later being convicted of racketeering and fraud charges. By 2004, something had to be done to save the PKI effort, which was failing even though Illinois was distributing certificates for free.

"We called this our 'IT rationalization,'" says Mark Anderson, head of the PKI project. Basically, the state agencies and the IT department settled on a last-ditch plan to centralize the administration of PKI at the CMS level, having CMS do the technical work on behalf of the state agencies.

"We centralized the infrastructure, consolidating the servers and LANs," Anderson says. "We run the master directory, the public-key and revocation list."

CMS basically took over technical responsibility for issuing digital certificates, delivering them upon request to agencies over the state's private-line network.

State of Illinois IT executives Doug Kasamis (right) and Mark Anderson have been immersed in reshaping the state's once-disappointing PKI project.

"Today, we're the certificate authority," says Kasamis about the CMS role. Illinois, which submits to an annual "eValidate" audit by Deloitte & Touche required by the state's e-commerce PKI law, keeps the root keys on a server locked in an isolated room in the Springfield, Ill., data center. Illinois also stores what it calls the signature blob of all digitally signed content, which provides proof, if that's ever needed, of what user certificate signed what content.

That process has worked to salvage the PKI project from failure. While Illinois is far from reaching that million-certificate milestone once envisioned by Ryan, today the state has issued more than 107,000 digital certificates on behalf of state agencies, universities and law enforcement to distribute to individuals doing business with them.

Most of these are regular certificates in which an individual only has to present an Illinois driver's license to obtain one. But in the first-level system of certificates that's been set up, some are high-assurance, requiring fingerprinting and a background check.

"The first-level certificates would be used with our Web-based interface to validate a driver's license, for example," Kasamis says. Other applications include Medicaid providers locating client benefit information online, and water-treatment facilities that submit wastewater-discharge monitoring reports with the Illinois Environmental Protection Agency (EPA) using PKI.

"Protection of information is very important so the encryption and signing is important to us," says Illinois EPA Director Doug Scott about digital certificates.

The EPA's Web-based application for filing forms and signing them with a digital certificate offers an alternative to filling out paper ones and faxing or mailing them in, Scott says. Slightly less than half of the EPA's documents are submitted electronically with digital signatures now, he says.

To encourage more electronic filing, the EPA recently gave out $500 to 100 people randomly selected from among those who do business with the EPA to get them to use computer resources to file electronically.

Digitally signed files have proven a boon to the EPA because the information on wastewater, such as estimated flow, tends to be more accurate when submitted over the Web than that mailed into the EPA in paper form.

"In terms of the accuracy of the information, the computer has estimated flows, and if the flow is listed much higher than anticipated, the computer will flag it there online," Scott says. Because the Illinois EPA shares its data with the federal EPA, Illinois checked to make sure there was no problem with digital-certificate-based filing. ■

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Microsoft maintenance program fails

BY JEREMY KIRK, IDG NEWS SERVICE

IT procurement managers are finding that Microsoft's Software Assurance maintenance program may not save them money as hoped, according to a survey released last week by Forrester Research.

The Microsoft program guarantees updates to new products along with support and training tools. One of the most compelling reasons to buy Software Assurance was free upgrades from, for example, Windows XP to Windows Vista.

But Microsoft hasn't stuck to a consistent release schedule, which can mean the program could cost companies more money than simply buying new licenses as needed, according to the four-page Forrester report, written by Julie Giera, a vice president at the research firm.

For desktops, Software Assurance is 29% the cost of an annual license. If Microsoft goes at least four years between releases — the company went about five between XP and Vista releases — the cost of Software Assurance works out to 116% of a new desktop license, Giera wrote. For servers, Software Assurance is about 25% the annual cost of a license.

> "The uncertainty regarding product releases makes it difficult . . . to justify a three-year SA renewal."
>
> **Julie Giera**
> a vice president at Forrester

"The uncertainty regarding product releases makes it difficult for IT procurement and sourcing professionals to justify a three-year SA renewal," the report said.

Microsoft has not yet published a road map for products released since November 2006, such as Windows Vista, Office 2007, SharePoint 2007 and Exchange 2007.

Of 63 IT procurement professionals Forrester surveyed, 86% said their licensing arrangement with Microsoft will expire this year. Twenty-six percent said they will not renew Software Assurance, with 31% still undecided. Another 18% said they would renew for some products, with the remainder saying they would probably or definitely renew.

About 74% of those who said they would not buy the same amount of Software Assurance maintenance said the economics did not make sense, and 59% said they did not expect to get a new product release.

Forrester is advising companies to negotiate early with Microsoft and hold out for better deals. "Discounts in the 7% to 15% range, depending on your size and level of spending, should be the foundation of any renewal discussion," the report said.

Companies should also simply do the math. "This sounds like common sense, but we're continually surprised by the number of companies that don't take the time to conduct a financial analysis of the costs and benefits of SA," Forrester said.

Microsoft could not be reached for immediate comment. ■

FCC ignores 100 years of wisdom

NET INSIDER
Scott Bradner

Decision on software radio fails security 101

French cryptographer Auguste Kerckhoffs published a set of six design principles for military encryption systems. The second of these principles is generally known today under the observation that security through obscurity is not security. The FCC seems not to have read the history books or to be aware of how its sister federal agencies develop security standards.

In a common English translation, Kerckhoffs' second principle says that a secure crypto system "must not be required to be secret, and it must be able to fall into the hands of the enemy without inconvenience."

There are many reasons for this. They range from the catastrophic results in the case of a breach that exposes a weakness to the reduced chance of a weakness if many eyes look at a system before it is deployed. The latter is the primary reason that the federal National Institute of Standards and Technology (NIST) conducts public contests for new encryption standards. Security expert Bruce Schneier published a very good essay on this topic a few years ago (www.nwdocfinder.com/9537).

The FCC has just decided that obscurity is better than security when it comes to software radios.

Specifically, it said "manufacturers should not intentionally make the distinctive elements that implement that manufacturer's particular security measures in a software defined radio public" if that would help circumvent FCC rules.

Because no manufacturer will want to prove that public disclosure will not cause such a risk, they are being told to keep the code secret.

On one hand, this is like saying that manufacturers should keep circuit diagrams of old radios secret so that someone would not know where to solder in a resistor to change the output strength. And on the other, it's pretending that hidden code somehow will be hackproof.

In the same decision the FCC made it clear that open source software is in the FCC doghouse: "A system that is wholly dependent on open source elements will have a high burden to demonstrate that it is sufficiently secure to warrant authorization as a software defined radio." This is a message that I am sure was well received in Redmond, but a message that demonstrated bias rather than analysis on the part of the FCC.

The Software Defined Radio (SDR) Forum politely responded that the FCC did not know what it was doing and asked it to get a clue (www.nwdocfinder.com/9538).

With this decision, the FCC reinforces my decade-old suspicion that clues just do not like hanging around Washington, D.C. (Postman: Read that Letter! www.nwdocfinder.com/9539).

It is not at all sure that the SDR Forum or anyone else can find clues that are willing to undertake the mission of breaking down the mental barriers protecting the FCC from the knowledge of the past or from the technologies and business models of the future, but stranger things have happened. For example, the last time the FCC tried to make rules about software the courts force-fed them the clue that this was not the FCC's job. (See Broadcast flag: Protecting the past at www.nwdocfinder.com/9540).

It just might be that a court will tell the FCC the obvious — that the design of secure systems is not one of the FCC's missions (or competences).

Disclaimer: "Harvard" and "clue" have been associated more often than "Harvard and clueless," but this exploration of clue locale is my own, not one from the university.

Bradner is Harvard University's technology security officer. He can be reached at sob@sobco.com.

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Bottomless e-mail storage

BY VICTOR CHANG

With e-mail the dominant enterprise communication vehicle — used for everything from simple notes to purchase orders, contracts, invoices and other critical business documents — managing swelling message stores has become a primary concern.

But today's most commonly deployed enterprise e-mail servers store data using database architectures that perform large numbers of separate I/O operations to complete a single transaction. To meet the demands, organizations typically add costly, dedicated storage and strictly limit individual storage capacity.

Open e-mail servers, however, enable a new, open messaging-storage process based on less expensive, modern filing systems that overcome the limitations of database architectures and improve overall performance. File-based storage lets these e-mail systems scale cost-effectively and decreases system-management complexity and administration overhead. This flexible approach simplifies the storage model and lets mailboxes (potentially bottomless) grow to sizes that are more conducive to the way employees use e-mail.

Performance issues

Modern Linux filing systems, such as XFS and Ext3, are fast, flexible, reliable and efficient. These systems, for example, support such features as journaling, which is used in playback of operations following a power cut, and semi-offline storage, which allows low-cost storage for rarely accessed files. Linux filing systems also support clustering, letting enterprises build file-system clusters to support any level of file-system reliability.

Leveraging a file-based e-mail store offers significant performance improvements and potential cost savings because the file system does not require multiple read/write commands between the e-mail and the storage subsystem. Performance is improved and cost savings come from using less expensive commodity-storage systems that let IT provide much larger mailboxes economically. A file-system approach addresses:

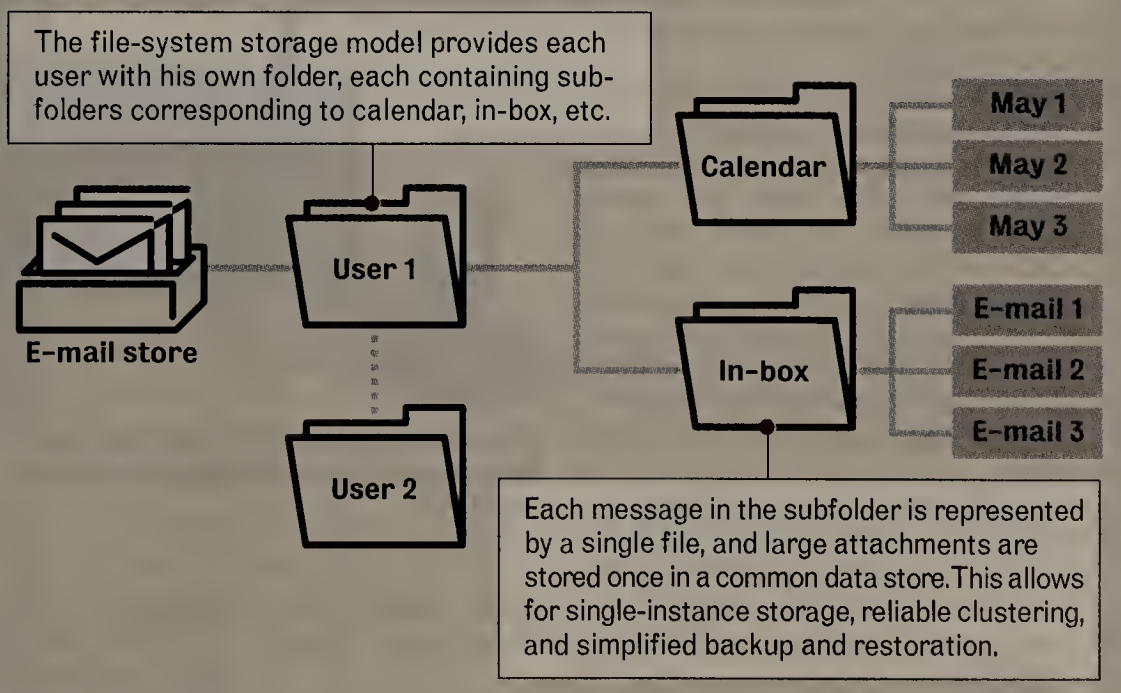
- **Storage for large data objects.** Open e-mail server systems can employ single-instance storage at the file-system level for large data objects attached to messages — or even for large e-mail bodies. Each large object can be put into a separate file that can be linked to from multiple places.
- **Backup operations.** Using a file-based storage system for backup operations is simple, live (no freeze or snapshot step is required), incremental, and detailed down to the message (file) level. This makes backing up the mail store as simple as backing up a file server. Additionally, file-server backup allows incremental backups (backing up just messages that have changed since the previous day) with industry-standard backup tools. And administrators can make mailboxes significantly larger as a result of backup time being eliminated.
- **Restoration.** Backup records let enterprises easily restore records that are accidentally lost or deleted, or that are required for compliance or other regulatory purposes. The file system's "one file per message" architecture simplifies restoration because it has no database-synchronization issues. This allows a detailed restoration; IT can restore a single message by restoring a single file, a folder by restoring a folder, a user by restoring that user's folder and subfolders, or the whole store by restoring the folder tree that contains all the users — without worrying about synchronizing the live database with the backup.
- **Database corruption.** File-based storage eliminates the problem of database corruption, because it has no intermediate database that can fragment or become corrupted. Each user has an individual folder within the store; each folder contains subfolders corresponding to the calendar, in-box and other e-mail functions. Each message in a subfolder is represented by a file. With "one file per message" any corruption that occurs from a disk malfunction or within the store is limited to a single file and will not spread to where it can crash the entire system over time.
- **Disaster recovery.** Disaster recovery of an e-mail message store also is faster and simpler with a file-system architecture because it provides an easy way to build low-cost server clusters (an active and passive pair of servers in front of the file system) that dramatically improves disaster recovery by eliminating database-synchronization issues.

All the advantages of file-based storage systems add up to a powerful new way for enterprises to bring the capabilities of their e-mail system in line with the needs of their e-mail users. Users get all the storage they need, and enterprises gain a far easier, more cost-effective method to handle e-mail storage.

Chang, vice president of engineering at PostPath, can be reached at vchang@postpath.com.

Simple file-based e-mail store

The file system represents a simpler approach for e-mail storage than the traditional database model, which involves using a complex set of rules to keep track of relationships between entries.



GEARHEAD

Mark Gibbs

CD fingerprints

Following my discussion a few weeks ago about a suite of CD/DVD tools called Virtual CD, reader Tim Cary, who hails "from out in the beautiful western part of [Massachusetts] ... Easthampton," wrote: "I was particularly intrigued by the fact that after ripping to the MP3 format in WinAmp, it would read the song info and fill in the headers." Cary wondered how this worked so ... there are two ways to figure out what is on a CD: fingerprinting and CD text.

Fingerprinting, the more common method (which used to be known as CDDB) is used by the commercial CD-identifying service offered by Gracenote (www.nwdocfinder.com/9541) and two free CD databases: Freedb (www.freedb.org) and Tracktype.org (www.nwdocfinder.com/9542).

The fingerprint of a CD, called the CDDB ID, is an almost unique value —"almost" because it is possible for two (or more) compact disks to have the same fingerprint. Freedb explains: "The disc ID ... is not as good as it could be — in fact, it is pretty bad as a unique identifier for a CD. Therefore, completely different CDs (with the same length in seconds and the same [number of tracks]) can have the same disc ID ....This disc ID algorithm and the cddb protocol can unfortunately not be changed without losing backward compatibility to existing applications."

According to Wikipedia, the CDDB ID "identifies CDs with a 32-bit number, usually displayed as a hexadecimal number containing eight digits: XXYYYYZZ. The first two digits (labeled XX) represent a checksum based on the starting times of each track on the CD. The next four digits (YYYY) represent the total time of the CD in seconds from the start of the first track to the end of the last track. The last two digits (ZZ) represent the number of tracks on the CD."

Actually, that description was for the old CDDB1 service, the free version of the Gracenote database, which was shut down in 2001. As far as I can determine the IDs in the "new" Gracenote database are formed using the same algorithm, but the old access protocol, also called CDDB1, has been changed by Gracenote and is not backward compatible.

If you feel inspired, you can examine an example of Perl code that performs the CDDB1 calculation at www.nwdocfinder.com/9543 or a Java version at www.nwdocfinder.com/9544.

The free services both support the CDDB1 ID format and, like Gracenote, support access via an HTTP form (unique to each service), but unlike Gracenote support the CDDB1 protocol (www.nwdocfinder.com/9545) — Gracenote uses a proprietary version for commercial reasons. Note that Gracenote also keeps the CDDB IDs hidden while freedb and tracktype both display the ID and allow you to search by it.

Just in case you were asking yourself, "Self, I wonder what the ID is for Led Zeppelin's 'Led Zeppelin III,'" the answer is 7f10d60a.

WinAmp, in common with many other music-management applications, figures out the CDDB ID when it reads a CD and then automatically looks it up, using whichever CD database you've configured it for. Thus, when you rip a CD, WinAmp can fill in the MP3 header tags.

Actually, depending on which service you use, you will occasionally get multiple matches in which users have disagreed on the details of a CD or in which, as I pointed out earlier, two or more CDs have the same fingerprint. WinAmp will ask you to choose which you think is the correct version for your CD.

Next week, CD Text. Until then, sing like a Byrd to Gearhead at gearhead@gibbs.com.

COOLTOOLS

Keith Shaw

Wireless system not practical

The people have spoken! After an onslaught of encouraging e-mails (I never realized my column could cure dog polio, but one reader said it did that and saved his marriage), Cool Tools has returned to the print publication. You can all put your pitchforks and torches away and enjoy more Cool Tools goodness.

The scoop: Soundmaster Wireless Speaker System, by Excalibur Electronics, about $100. Available at www.nwdocfinder.com/9529 or from Hammacher Schlemmer.

What it is: The Soundmaster Wireless Speaker System lets you stream music from an iPod wirelessly to a speaker box over the 2.4GHz frequency (up to 150 feet away). The speaker part of the system is a wireless receiver, and includes an AM/FM radio, an alarm clock and an auxiliary input jack (in case you want to use the device as portable speakers for other music devices with auxiliary audio outputs). The transmitter is an iPod docking base that can also recharge the iPod in addition to streaming the music content to the speakers.

The Soundmaster Wireless Speaker System was cool, but why would you need it?

Why it's cool: This is a nice alternative to iPod speaker systems/docking stations where the iPod is attached to the portable speakers. If you're looking to place the speakers in a different location from where your iPod is, the wireless capabilities of the Soundmaster system let you do this.

Some caveats: Oddly, I couldn't think of any practical scenarios in which you would want or need the speakers separate from the iPod. The speakers are water-resistant, so putting the speakers outdoors, or in a kitchen or bathroom would mean you could protect your iPod from water splashing onto the system, but it seems odd that you'd need to spend $100 just for that feature.

The separation of the iPod from the wireless speakers makes it more difficult to do simple things like switch songs and adjust the volume, for example. To switch songs you'd have to be near the iPod, and to adjust the volume you'd have to be near the speakers. The 2.4GHz frequency also means that you could face some wireless interference issues with cordless phones, microwave ovens or other devices that share the same frequency.

In addition, the clock setting on the speakers only displayed time in 24-hour mode, which meant I had to remember that 14:47 was 2:47 p.m. The addition of an auxiliary port is nice for attaching other non-iPod music devices to the system, but you can't do this wirelessly, as the small cable has to be connected to the speakers and your other music player.

Grade: ★★★★ out of 5 stars

We may be back in print, but we're going gangbusters online as well. Cool Tools blog, Twisted Pair podcast and the Cool Tools Video Show all reside online at www.networkworld.com. Fire up that newfangled computer and check us out! Shaw can be reached at kshaw@nww.com.

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Here's why you need a mobility strategy

EYE ON THE CARRIER
Johna Till Johnson

Last week we talked about the challenge of too much choice when it comes to mobility. The solution? A mobility strategy that defines:

- How, when and where to deploy mobility.
- Which user groups need specific mobile devices, services and applications.
- How mobile devices and services will be secured and managed.

As always, though, there's a "gotcha." In this case it's the fact that fewer than 40% of the companies I work with have such a mobility strategy.

That's a problem, because (as I noted last week), mobility is an expensive budget line-item — and it's about to get even more so.

If you're one of the firms lacking a mobility strategy, start by assessing your current state. How many carriers do you have? (If you're typical, it's two or more.) Which devices are deployed? Which applications enabled?

It's particularly important to compile your user profile. Which categories of users currently use mobile technology, and which would like to? Which applications do they have access to today, and which do they need?

Don't forget to assess the level of security and management. For example, are all mobile devices password-protected by default? Can they be wiped automatically in the event of loss or theft (to protect sensitive information)? Do you have an asset-tracking system in place so you can tell exactly how many devices you have? Don't worry if the answers to the last few questions are no, no and no. Understanding your starting point is the first step in remediating the situation.

Speaking of remediation, your next step should be to figure out your goals. Are you aiming primarily to reduce costs and complexity? Increase productivity? Improve performance? Improve functioning? Or maximize scalability? Of course, in most organizations the answer is "all of the above" — but typically they're in some sort of priority order. For example, if the plan is to increase your current 100-person rollout to 10,000 by the end of 2007, maximizing scalability probably is a top goal.

Once you have your current state and future goals, you can begin to put in place the strategy. Here are some guidelines:

- To reduce costs, buy in bulk. Have an explicit goal of reducing the number of carriers as low as possible (one or two is ideal). Limit the number of devices that users can deploy, and make it clear which users have the right to deploy specific devices. Finally, focus on the soft costs associated with asset configuration, deployment and management. Automate these as much as possible.
- To improve performance and functioning, push vendors on their plans for capabilities, specifically integration with wireless LANs, VoIP PBXs and key applications. For example, Research In Motion recently announced plans to move forward with a Wi-Fi-enabled version of its popular BlackBerry.
- Finally, plan for investment. Mobility will be a critical business enabler for the next few years. By 2009, companies that lack a mobility strategy will be as outdated as companies that lacked Web sites in 2000.

Johnson is president and senior founding partner at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.

Wireless VoIP
continued from page 18

mitters and wiring to tie the transmitters to the PBXs.

Other Southwestern facilities were doing similar integrations using Siemens gear in conjunction with Spectralink.

At the same time, the medical center was installing WLAN gear for data applications on hospital floors and in clinics, the same places the 900MHz wireless phones were installed. When it learned VoIP phones supported by Siemens over the same wireless network could replace the 900MHz wireless phones, the Southwestern Medical Center stopped deploying them in favor of VoIP.

That required adding access points to handle the greater load and upgrading some LAN infrastructure to support VoIP, says Hull. The handsets are PBX extensions with all the features — hold, transfer, conferencing — that wired extensions have.

Southwestern is interested in technology that lets doctors and some other medical personnel roam beyond the campus, but has no firm plans to deploy it yet, Hull says. The school is starting with deploying Wi-Fi access points among campus buildings to allow roaming outside individual buildings.

Hull says dual-mode phones could be attractive that support wireless VoIP and cellular and also support two phone numbers. Users would carry one device that would work on-campus and off and could receive separate bills for business and private calls.

It is possible to extend wireless throughout a business using single-mode cellular phones, says Redman. By using interfaces with corporate PBXs, cellular-phone carriers can turn over call control to their business customers, as well as PBX features, such as hold and voice mail. This way, a call to the corporate phone network from a cell phone would be directed by the carrier to the corporate PBX.

In this scenario, there is no need for handoffs between Wi-Fi and cellular networks or dual-mode phones, because all calls are delivered over carrier cell networks.

If cell services within corporate buildings and campuses are weak, providers can install repeaters and other antenna infrastructure to provide adequate capacity and coverage, Redman says. IP phone systems from Ascendant Systems, Avaya and DiVitas support this feature.

The challenge this technology faces lies in the phones, because cell phones lack the dedicated feature buttons that typical PBX desk phones have. So phone makers will have to develop graphical interfaces that display buttons on the phone screens for such PBX features as conferencing and call transfer, Redman says.

The alternative is pressing number codes using phone keypads to manipulate these features. "But using short-codes adds complications to using the features," Redman says.

Using dual-mode phones offers customers the possibility of saving money by saving on cellular minutes. At outdoor retailer Gander Mountain, dual-mode phones could be a way to save on cellular minutes when traveling executives are at headquarters in St. Paul, Minn., or in stores, says Joe McClung, senior network engineer for the 110-store chain.

The company is swapping out Colubris Networks Wi-Fi access points for those from Cisco, and that gives Gander the option to use dual mode, McClung says. In the meantime, sales associates in stores carry single-mode Wi-Fi phones to answer calls from customers. Incoming calls roll from wired phones, to Wi-Fi phones of associates, to Wi-Fi phones of managers, he says.

Calls are answered more reliably with the Wi-Fi phones, and sales associates are more productive, because they spend more time helping customers or stocking shelves. "The majority of associates are hardly ever at the wired phones," McClung says.

"I find it very intriguing," says Southwestern's Hull about dual-mode phones. "It may be where wireless is moving to." ■

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CRUNC

EMC's makeover shifts from acquisition to execution phase

BY JOHN S. WEBSTER

Since 2003, when EMC launched its transformation from a simple hardware storage vendor to a multifaceted information-infrastructure provider, it has racked up 15 straight quarters of double-digit revenue growth and strong profits.

However, the company's stock price has been essentially flat over that period, an indication that for Wall Street at least, the jury is still out on whether EMC can deliver on its grand vision of information management.

Customers and industry analysts agree that the company has made great strides over the past few years in laying out its strategy and in making key acquisitions aimed at filling out its portfolio.

But they also agree that EMC still has work to do. Specifically, the company needs to:

- Integrate its many acquisitions into a coherent product line.
- Project a clear marketing message to customers and shareholders alike.
- Retain the high regard it has from customers by making it easy for them to buy products and get service and support across product lines.
- Deliver more profits.

Integration

Since its buying binge began with the acquisition of backup vendor Legato in 2003, EMC has pieced together components that will help its customers not only store data, but manage and secure enterprise data no matter where it resides on the network.

In addition to Legato, EMC has snapped up security vendors RSA Security, Network Intelligence and Authentica, virtualization players VMware and Rainfinity, content-management providers Documentum and Acartus, and management vendors ProActivity and Smarts. All told, EMC has spent $7 billion to get more than 20 companies.

This dizzying pace has some customers wary. "It concerns me that so much acquisition will eventually cause integration difficulties for us," says Ann-Marie Horcher, senior groupware specialist at Dow Corning Corp. in Midland, Mich. She currently uses VMware and Documentum. "You can't expect everything to play together nicely," she says.

EMC appears to be on the same page as its customers when it comes to the integration issue. The company hasn't made any major acquisitions this year and Mark Lewis, executive vice president and chief development officer, says the buying spree is, for the most part, over.

"We're phenomenally well positioned with the assets we've built internally and those we've acquired over the last several years. Aside from smaller technology 'tuck-in' acquisitions, there are no large deals on the drawing board," Lewis says. (EMC did make one of those tuck-ins in early June, when its RSA division picked up tiny identity-verification services vendor Verid.)

"Integration of all this technology, woven together in a seamless orchestration — what we refer to as information infrastructure — is our strategic move, and will steer the way for the future of information management," he adds.

Integration is no small challenge, but EMC has made announcements indicating that it is a top priority. For example, at its May user group meeting, the company announced that by year-end it will begin delivering a common platform for managing the company's myriad storage lines.

Marketing

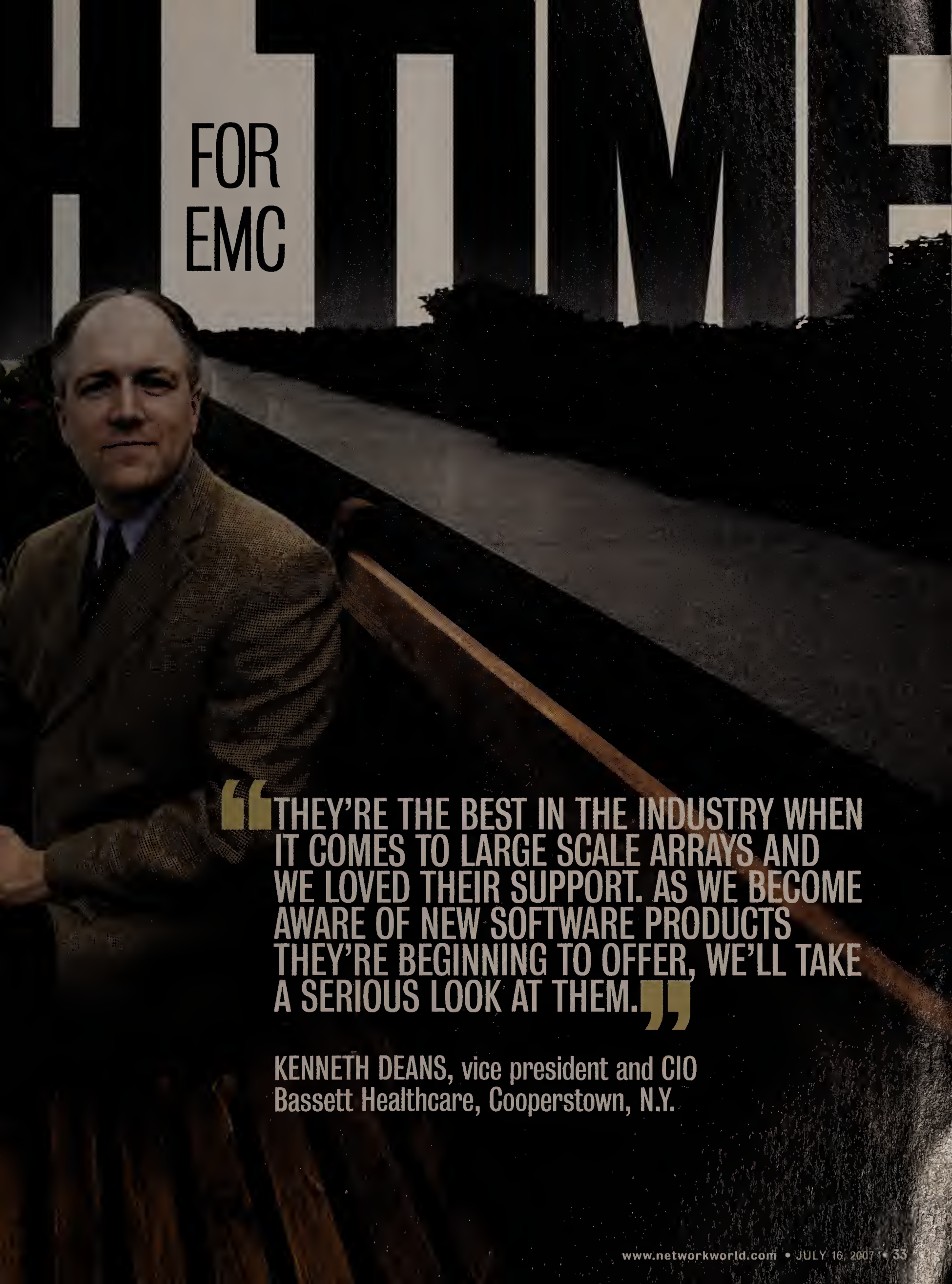
On paper, EMC has been successful in transitioning from its core storage hardware business, which is becoming more of a commodity, into faster-growing and higher-margin software and services.

"In 2001, up to three of every four dollars in revenue were from hardware sales," says Brian Freed, an analyst at Morgan Keegan & Co. In 2006, software and services accounted for about 52% of EMC's business, compared with 48% for hardware.

Ultimately, however, success involves more than just adding new software revenue streams from acquired companies. EMC has to sell its vision of information management and

ELIZABETH WEINBERG

FOR EMC



"THEY'RE THE BEST IN THE INDUSTRY WHEN IT COMES TO LARGE SCALE ARRAYS AND WE LOVED THEIR SUPPORT. AS WE BECOME AWARE OF NEW SOFTWARE PRODUCTS THEY'RE BEGINNING TO OFFER, WE'LL TAKE A SERIOUS LOOK AT THEM."

KENNETH DEANS, vice president and CIO
Bassett Healthcare, Cooperstown, N.Y.

demonstrate how the recently acquired software technology fits into the company's existing product lineup.

Since 2003, EMC has led the industry in promoting the concept of information life-cycle management (ILM). These days the term ILM is taking a back seat to the concept of information management, a broader concept that ecompasses not only managing data through its life cycle, but also protecting and securing it.

For some customers, the message remains murky. "Their new marketing strategy is not clear to me," says Chris Carter, director of enterprise technology services at PPL Corp., an electricity-generation company in Allentown, Pa. "They have the IT mind-share in storage hardware, but the big question is can they gain mind-share in the virtualization market, with VMware and other markets."

Carter says he wonders where Documentum, Smarts, RSA and other recently acquired technologies fit into EMC's overall product plans. "EMC has a credible story, and when they do articulate it, they're successful. If they can say, 'Storage is about infrastructure, but information is about business,' as a way to break out of the core storage view that people have of them, they'll be successful," Carter says.

But Carter says he isn't ready to entrust EMC with all of his information-infrastructure needs. "It would be a leap of faith — one that I don't have yet — to say that EMC has done so well with storage that they'll be equally good with information security. Just because they've been good at spinning disks doesn't imply that they can also be our only infrastructure management vendor," he says.

Sales, service, support

EMC faces another challenge when it comes to the basic blocking and tackling of sales, service and support.

"Against their peers, they have the advantage of being focused on storage. But one area they need to move up in is the services side of the organization," Freed says. "IBM and HP are very established from a services standpoint. The acquisitions have expanded EMC's technology, and they have to build that out to their services organization."

That's what Horcher is hoping for with her Documentum and VMware products. "If they assume most of the integration burden, we don't have to spend as much time developing software links between applications — they'll do standard integration, and we can customize it further."

Brian Babineau, an analyst at the Enterprise Strategy Group, cautions, "Integrating all the companies and becoming more efficient at getting into new markets can be expensive at the field level, where you might need multiple offices, and that can impact business metrics."

On the plus side, if EMC can successfully bring the new technologies into the fold and convince users that it will continue to offer the same support and technical help, it will have an opportunity to sell acquired software to satisfied existing customers.

"It will be challenging for them," says Kevin Westover, a systems engineer at NuSkin Enterprises, in Provo, Utah. NuSkin has invested $10 million in EMC's Symmetrix storage platform, including TimeFinder storage replication and ControlCenter storage resource-management software.

But Westover adds that EMC is capable of rising to that challenge. "We've dealt with their software people in their professional services group when we've installed software related to Symmetrix systems. We've had good experiences with the software-support side. From what I've seen and heard, if they can somehow leverage their hardware with the software they are acquiring, integrate that and say, 'We have great hardware, and all this software works with our hardware,' they should succeed."

EMC's Lewis hopes to lay those worries to rest. "We appreciate and understand customer concern. EMC has been very successful at acquiring technology, and it's a track record we're proud of, in terms of not only what we've done, but how we've done it. In acquisition through acquisition, some of which might be different technology than EMC's, we did need to retrain the sales force, while not breaking what we bought," Lewis says.

At Johns Hopkins University's Applied Physics Lab (APL) in Baltimore, EMC's support group has already proven itself. The APL implemented Rainfinity file-virtualization software just months after EMC bought the company in 2005, and EMC's support has remained strong for the new product.

"They haven't been too distracted yet by all the acquisitions. We still have contacts at Rainfinity that I can get hold of. We've had problems, and they got them done quickly. Now, Rainfinity's service number is the same as the main call center, which I was always a fan of. If you need to talk to someone, you can get them on the phone within 15

See EMC, page 36

Buying binge

Since 2003, EMC has spent an estimated $7B on acquisitions.

Date	Company	Technology	Price
June 2007	Verid	Identity services	n/a
November 2006	Avamar	Backup and recovery	$165M
September	Network Intelligence	Security	$175M
2006	RSA Security	Security	$2.1B
September	ProActivity	Business process management	n/a
2006	nLayers	Application discovery and mapping	n/a
June 2006	Akimbi Systems	Virtual capture and restore for VMware	n/a
June 2006	Interlink Group	Microsoft IT services	n/a
June 2006	Kashya	Replication and protection	$153M
May 2006	Authentica	Security	$75M
May 2006	Internosis	Microsoft IT services	n/a
April 2006	Captiva	Document capture	$275M
January 2006	Acartus	Content management	n/a
December 2005	Rainfinity	Network-attached storage file-virtualization	$100M
October 2005	Smarts	Event automation and real-time management	$260M
August 2005	Dantz Software Development	Backup and recovery	$50M
February 2005	Allocity	Backup, restore and provisioning for Microsoft exchange	$10M
October 2004	Astrum	Storage resource management	n/a
October 2004	VMware	File virtualization	$635M
April 2004	Documentum	Content management	$1.7B
January 2004	Legato Systems	Backup and archiving	$1.3B

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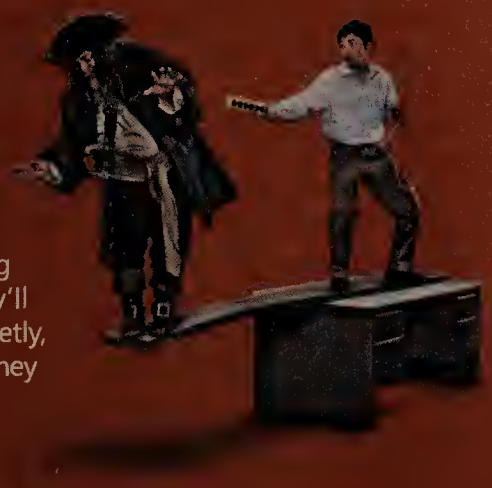
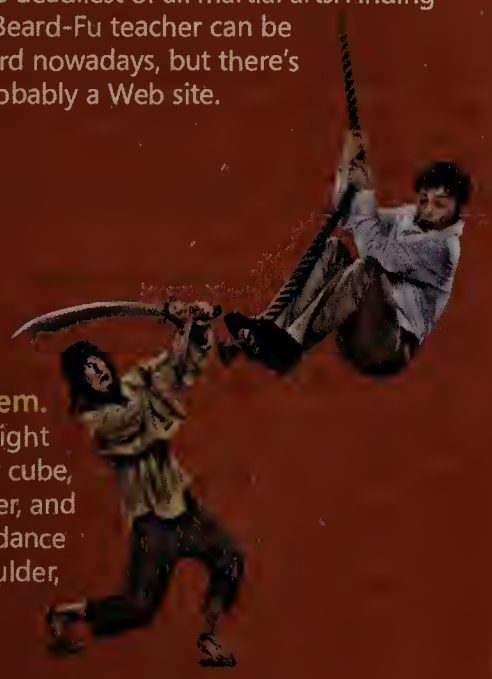
2. Walking the plank.
Pirates are big on getting their victims to walk the proverbial plank. Use this against them. Pose as a plank salesman; pitch a new, better plank. Ask them to "test the plank" and, once they're out on it, reveal the truth. The humiliation might just get them to leave.



3. Pay them off.
Pirates are obsessed with booty, or treasure. A supply of gold chocolate coins placed in a bag or chest will dazzle them. They'll want to bury it somewhere, secretly, and will lose whatever interest they had in you in the first place.

4. Use your skills of Beard-Fu.
Beard-Fu is the ancient art of facial hair combat. Grab and pull the Pirate's beard, yank a sideburn—if done properly, it's the deadliest of all martial arts. Finding a Beard-Fu teacher can be hard nowadays, but there's probably a Web site.



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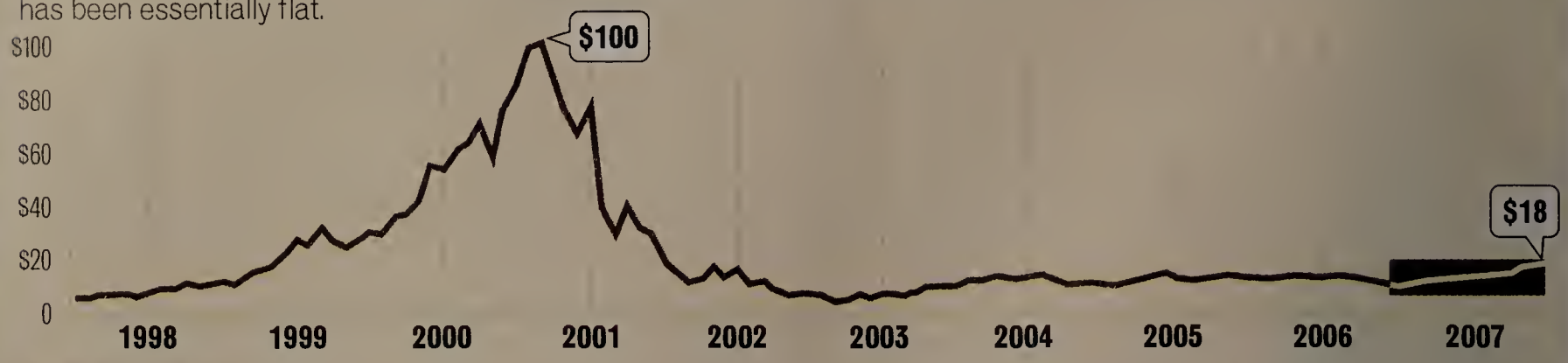
The long view

EMC stock peaked at more than $100 a share in 2000 and then plummeted during the dot-com crash. Since 2002, the stock has been essentially flat.



Stock surge

In the past year, EMC stock has doubled, from $9 a share to $18.

EMC
continued from page 34

minutes," says Bill Fleming, director of infrastructure planning at APL.

Profits

Despite the fact that EMC has grown to become an $11 billion technology giant with 31,000 employees, 100 sales offices and 50 distribution partners worldwide, the company has been getting no love from Wall Street.

EMC stock has bounced around in a narrow band between $10 and $17 a share for the past few years, and shareholders have become restless. After all, EMC stock had been a high-flyer in the 1990s, skyrocketing from around $10 a share in January 1998 to more than $100 a share in 2000. Then came the dot-com crash, and EMC stock has never recovered.

In March, the country's largest pension fund put EMC on its annual list of underperforming stocks. And shareholders have complained that EMC spent too much on RSA.

EMC CEO Joe Tucci in March acknowledged that the company overspent for RSA, which he says was valued at $1.6 billion when it was acquired — $500 million less than EMC paid. Tucci added that he is confident that the RSA acquisition will prove itself over time.

"Over the last three years, their stock has gone nowhere. In 2007, one of the questions will be how will they grow at two times IT budget growth in light of analyst reports that in terms of the macro economy, there are cuts in IT budgets. Those are the questions people will look to," Morgan Keegan analyst Freed says.

Paul Mansky, an analyst at Citigroup, adds that investors generally agree with EMC's acquisition strategy. But he adds that its performance has lagged behind expectations.

In an effort to boost the company stock price, EMC has undertaken several initiatives, including a recent recapitalization and staff cuts (a modest reduction of around 1,100 people).

Another challenge for EMC is to increase employee productivity. "Revenue per employee actually declined about 2% last year, while operating expenses per employee increased by about 6.5%, which equates an 8.5% decline in employee productivity. Compare this to the prior two years in which the delta was a net positive 2.4% and 1.9%, respectively," Mansky says.

According to Lewis, it will take a combination of marketing its new technology and image, a well-run product strategy and creative financial management to spur upward movement in EMC's stock.

"In addition to continued articulation of — and execution against — our information-infrastructure strategy, which the industry is embracing nicely, we are continually evaluating ways to unlock value for investors. For instance, in 2006, EMC invested approximately $3.8 billion in share buybacks. We also recently announced our intent to IPO a portion of VMware," Lewis says.

In addition, there are signs that EMC's bid to step up in class and compete against such heavyweights as IBM and HP is starting to show results.

EMC's stock has been on a steady, upward course since August, doubling from a low of $9.44 a share to the current price of about $18 a share. (However, as bloggers on financial messages boards are quick to point out, EMC was selling at $17 a share in January 2002, so a $1-a-share increase in more than five years is nothing to write home about.)

The latest earnings report was mostly positive. Information storage kept up its steady growth at 7.7%, and VMware continues to lead the way at 95% growth over 2006, but content management and archiving slumped to a paltry 2.9% increase. Overall revenues were up 16.6% for the first quarter of 2007.

Analysts are predicting that the upcoming mini-IPO of 10% of VMware might help to jump-start EMC's stock price.

Analysts also are impressed with the way the company is taking a leadership position in the marketplace. "EMC and IBM are at the forefront of bringing infrastructure management together, but EMC is forging the way," says Joseph Martins, an analyst at Data Mobility Group in Nashua, N.H.

He adds, "EMC started the information-management talk, and they continue to bang the drum louder. They're successfully uniting two fields in a way that's meaningful. EMC has acquired all the pieces, and they have the money and the professional services to make it work."

One final factor in EMC's favor is that customers remain onboard. "Over the past two and half years, they have already proven to me that their quality is great — they're the best in the industry when it comes to large-scale arrays, and we love their support. As we become more aware of the new software products they're beginning to offer, we'll take a serious look at them," says Kenneth Deans, vice president and CIO at Bassett Healthcare, in Cooperstown, N.Y.

He adds, "I think with the growth of any company there are always challenges. My take is it's positive. If I went down our list of 80 vendors, they are in the top three in terms of quality, performance and service now, and they will remain so looking down the road. They've been stellar in every way. As long as they can continue with that, I'm happy."

Webster is a freelance writer in Rhode Island. He can be reached at john.s.webster@verizon.net.

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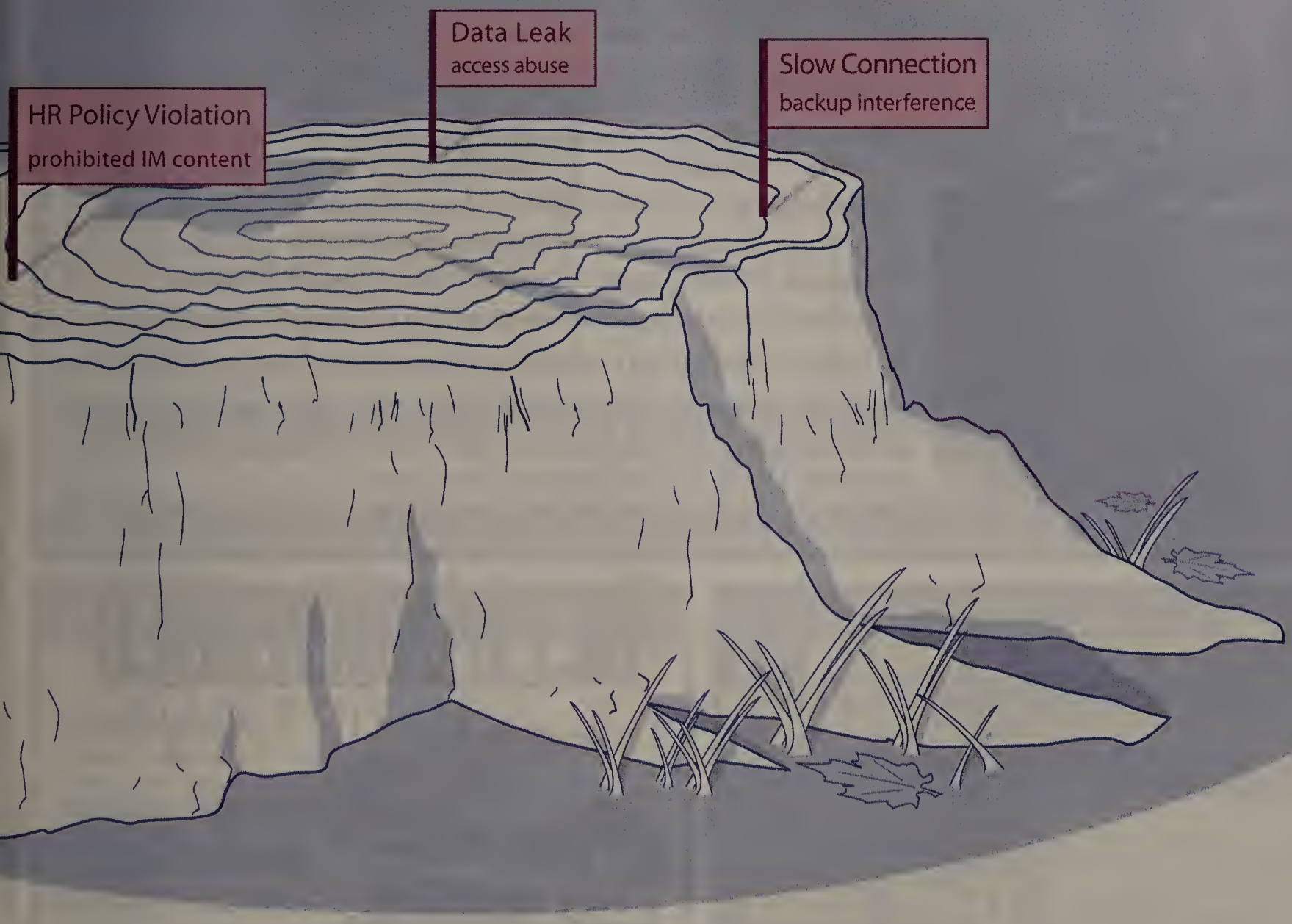

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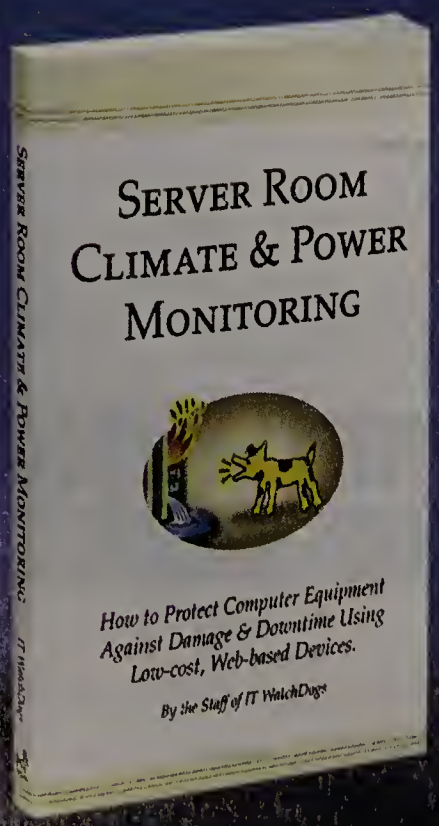

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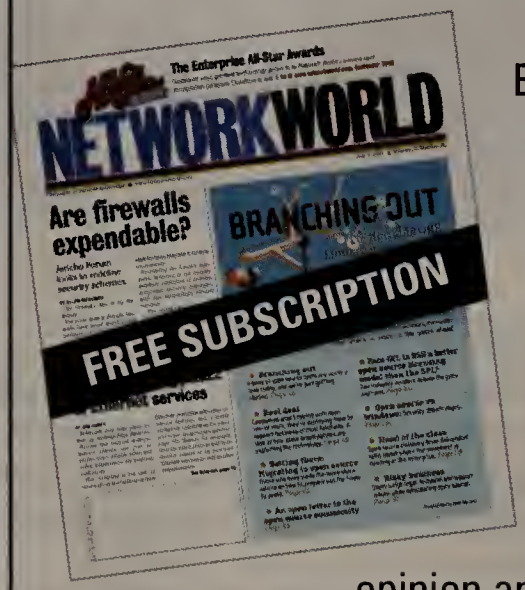

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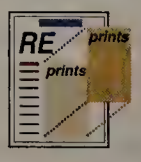

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Oracle
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engineering and architecture at Starwood Hotels and Resorts Worldwide, expects his organization will move to 11g in 2008. The hotel chain runs its main business on the HP-UX operating system on top of Itanium-powered computers, and the 11g beta wasn't available on that platform. "So, we will have to settle for the production release later this year and then at least six months of testing after that," he wrote in an e-mail. Starwood uses Oracle's database for almost all of its business processes, including reservations, check-in and out processes, and guest-loyalty programs.

He singles out the Database Replay and SQL Performance Analyzer features as giving customers "the biggest bang for the buck." Other useful features include the Transparent Tablespace Encryption, Virtual Columns and Partitioning enhancements, he added. There are several features he would like to see in 11g, including the ability to make a tablespace read only when there are active transactions in the database on different tablespaces.

Mike Amble, senior vice president of operations and engineering at Fidelity National Information Services, sees the new Fast Files feature useful to his organization. The company provides technologies to financial institutions and handles mortgage loan processing.

"We deal with a lot of odd forms of information," he says. For instance, when a house is sold, all the documents related to the sale, including appraisals and title documents, are sent back to the mortgage company in paper form and then scanned and stored. Fast Files will allow users to store large objects such as images in the 11g database as fast as storing such unstructured information in traditional file systems.

Amble hopes to migrate his organization over to 11g in 2008. "In the beta testing, we've not found a lot of issues, it should be a very easy transition," he said. One area where he'd like to see Oracle become more open is in enabling the management of multiple encryption tools, both Oracle and third-party software.

Andy Mendelsohn, senior vice president of database server technologies at Oracle, says the company has a parallel development project under way to work on 11g Release 2. One area not mentioned in the listing of 11g's new features is grid computing; that's what the "g" in both 10g and 11g stands for.

Mendelsohn confirmed earlier reports that Oracle won't be rushing to bring out an 11g update for its free Express Edition (XE) database. The new version will likely come with 11g Release 2.

Last week marked the official unveiling of Oracle's 11g database, and a look at its new features, pricing and availability information was not available. The vendor would confirm only that the Linux version of 11g will ship this quarter, probably in August.

Oracle also wouldn't comment on when 11g would be available for the other operating systems the database will support, including Microsoft's Windows. ■

Net Buzz
continued from page 42

Emoticons seem to engender intense vitriol in some. Has any of that ever been directed at you?

Not really. As I discuss on my Web page (www.nwdocfinder.com/9526), some people who encounter this phenomenon for the first time tend to go a bit crazy for a while, just like people who discover that you can include multiple colors and fancy fonts in an online document. They generally settle down after a while, but until they do, they can be annoying to those of us who have been using this stuff for many years and who try to use them sparingly — and also to those writers who see no need for smiley faces in the first place.

I find this overuse amusing, but some people, such as the magician and TV personality Penn Jillette, are more inclined toward apoplexy — I don't know if the outrage is real or feigned. But so far nobody has attacked me in person for spawning this idea, and most acquaintances who know about this think it's kind of cool.

I'm so disappointed to hear that about Penn Jillette; he's a favorite of mine, and I always considered him more reasonable.

Well, it's his job to be outrageous, opinionated and colorfully obnoxious — not reasonable. I've never met the guy. Perhaps he's a nice guy in person, though I doubt it — but I do find him interesting, and I enjoy his shows. I think Teller is the brains of the outfit, and (as far as I know) he has never said anything nasty about smileys. :-)

I've never taken the time to track down the exact Jillette quote, but I've seen lots of secondhand attributions like this: "Penn Jillette [...] recently wrote that emoticons are 'used by people who would dot their i's with little circles and should have their eyes dotted with Drano.'" If that's how he feels about random users, I shudder to think what he would do to the guy who started this.

On a happier note, Neal Stephenson, who is currently my favorite author (I'm about three-quarters of the way through his 3,000-page Baroque Trilogy — brilliant work!), wrote a magazine piece denouncing emoticons and their users, mentioning me by name.

A couple of years ago he visited Carnegie Mellon to give one of his very rare public talks, and I got an appointment to meet with him. We had a great conversation — not awkward after the first 30 seconds. Later, I noticed that he had posted a retraction of his earlier opinion, though I'm not sure if that was a result of our chat. So, for me, that was maybe the most fun and interesting exchange to come from all this.

Any final emoticon-ish thoughts that you'd like to share?

It has been very interesting to watch the infectious spread of the smiley face and the "turn your head sideways" principle from my first message, through the local research community on to other universities, and then around the world as the Internet spread into people's homes.

Now, 25 years later, radio signals with :-) and :-(should be passing by some habitable star systems. But even if there is intelligent life out there, and even if they are receiving our signals, what will they make of :-) and :-(?

They probably don't have faces.

You may register your own opinion about emoticons in our poll at www.nwdocfinder.com/9527. Or write to me at buzz@nww.com.

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BACKSPIN

Mark Gibbs

Technology for the people, by the money

When it comes to government technology policy-making, what does it mean to be "American"? You might, like an innocent child, assume it means the government supports open competition and lets the marketplace identify and select the best products in the interest of the consumer. But you would, my friends, be wrong.

The problem is that there really isn't a truly open market. When it comes to technology and the government getting involved, America is another banana republic where the biggest wallets get to apply the most political pressure.

Let me give you an example: HD Radio. In 2002 the Federal Communications Commission selected HD Radio as the official U.S. digital radio system. This was an interesting decision because HD Radio (the "HD" is part of the product's trademark name and doesn't stand for "High Definition" or anything else) is proprietary to iBiquity Digital (www.nwdocfinder.com/9530).

Even more telling in the FCC's decision was competing technologies — Digital Audio Broadcasting (www.nwdocfinder.com/9531) and Digital Radio Mondiale (www.nwdocfinder.com/9532) — which are open standards, well-established, ratified by the International Telecommunication Union (in 1994 and 2001, respectively) and better than HD Radio, were not adopted.

So the winning technology won't provide U.S. consumers with the greatest choice, foster competition or encourage innovation. The FCC's decision makes no sense if the agency is supposed to be managing a market that is driven by competition for the benefit of the public.

But it's a done deal. So let's consider another example: Software Defined Radio (SDR) and its potential offspring, Cognitive Radio (CR).

The idea behind SDR is simple — use digital technology to make a radio that can be configured by software to receive almost any kind of radio transmission (www.nwdocfinder.com/9533). Cognitive Radio takes the idea further by using SDR to change frequencies and modulations dynamically based on communications conditions (noise, interference, etc.).

The fact that software underlies these systems in theory means that anyone can create code to do the job. But theory and reality part company at the point where the FCC decided that proprietary solutions are preferable, in this case, to open source solutions.

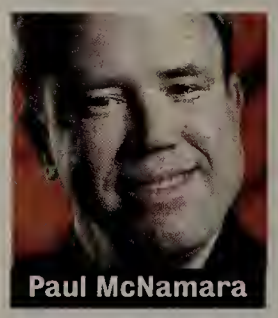
A new federal rule (www.nwdocfinder.com/9534) is in effect that means SDR and CR systems that use "open source elements" will find it hard to get FCC approval or perhaps will be excluded altogether.

The FCC's reasoning — inexplicably prompted by Cisco, of all companies — is that manufacturers should not use open source software "if doing so would increase the risk that ... security measures could be defeated or otherwise circumvented to allow operation ... of the radio in a manner that violates the Commission's rules."

This means that what the FCC and Cisco apparently want is unhackable software products! As Homer Simpson would say, "Du-oh!" Gentlemen, you must know that there is no such thing and anyone with the slightest clue will tell you that security through obscurity has never and will never work. Just consider how quickly the iPhone's "secret" access passwords were found!

What we have in these and many other cases is proof that if you want to know why a dumb policy decision was made just follow the money. These days it appears that any other reason would be un-American.

Send your comments to backspin@gibbs.com.



Paul McNamara

NETBUZZ

News, Insights, oddities

Emoticon turning 25: Thank this guy :-)

When the emoticon — known by some as the "smiley face" — turns 25 years old on Sept. 19, the man recognized as having typed the first one intends to mark the occasion with a cookie.

In the meantime, Carnegie Mellon computer science professor Scott Fahlman will brace for the inevitable parade of press inquiries, entreaties from emoticon enthusiasts and brickbats from emoticon critics, most notable of whom (to Fahlman, at least) is the entertainer Penn Jillette. The anniversary already has inspired an emoticon contest at Yahoo.

I recently had a pleasant e-mail chat with Fahlman in which he speaks of how his "invention" has brought him fame, not a red cent, and a meeting with his favorite author, Neal Stephenson, who in a 1993 essay eviscerated emoticonists, including Fahlman, only to retract that assessment a decade later. What follows is an edited transcript of my chat with the Father of the Emoticon:

Hi Scott: . . . Do you ever get tired of these interviews? :-)

Yes, but our university public relations people love them, and I'm happy enough to go along. It's a weird thing to be famous for, but it's nice to be famous for something.

Do you use emoticons? If so, when?

Yes, I use the two that I invented, :-) and :-(, in e-mail messages, plus occasionally a couple of others, such as the winky face, ;-). I don't like the noseless variants, :) and :(. I think they look like frogs, though I might prefer them if I did a lot of text messaging on a cell phone — one less character to type the hard way.

For some people, making up really complex smileys is a sort of hobby — you know, things like "Uncle Sam, Santa Claus, and the Pope being eaten by a python" — but I've never been into that and never use these. If you have to explain what the thing is, it's not really helping with your communication — at least, not in the same way.

Are you going to celebrate the 25th anniversary in some fashion?

I think we'll have a little local party for the Carnegie Mellon computer science community. There's a local restaurant chain, Eat 'n Park, that (by pure coincidence) is famous for their round smiley-face cookies. For a few dollars extra, they are willing to make me up a special batch of these with the face drawn on sideways. :-) So we'll probably serve a bunch of those.

We thought briefly about having some sort of symposium to mark the occasion, inviting a lot of experts on online communication and semiotics and the history of writing systems. That would be fun, but I didn't want to spend the time to make this happen — I'm trying to focus on my own research in artificial intelligence. [Fahlman leads the DARPA-funded RADAR project.]

I'm guessing you never turned a buck off of your "invention" (correct me if I'm wrong). How do you feel about that today, when so many make so much off so little?

No, I never made any money off of this, and never tried to. It's my little gift to the world. Anyway, I don't see any way to make nontrivial money from this. If there were some practical way in which I could charge people a few cents every time they used these symbols, nobody would use them. As far as I know nobody else has made any serious money from this idea either, so I don't have to feel regret.

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